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Products may be RoHS compliant.
Check mouser.com for RoHS status.

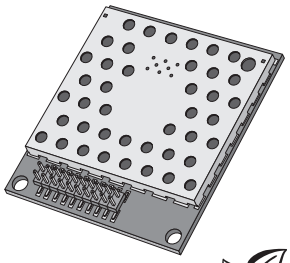
900 MHZ AC4490 SERIES - SERVER/CLIENT PROTOCOL

Compact AC4490 900MHz transceivers can replace miles of cable in harsh industrial environments. Using field-proven FHSS technology that needs no additional site licensing*, AC4490s reject interference, enable co-located system operation, increase output power and maintain data integrity.

AC4490s feature drop-in installation and a number of on-the-fly control commands, providing OEMs with a versatile interface for any application. They can be used as direct wire replacements, requiring no special host software for communication. All frequency hopping, synchronization and RF system data transmission/reception is performed by the transceiver.

Features:

- High 900MHz data rate: 115.2 Kbps
- Small form factor: 1.65 x 1.9 inches
- Operates in –40ºC to +80ºC temperatures
- Variable output power: 5mW to 1000mW
- One full watt enables 20-mile possible range
- Lowest cost one-watt module available



RoHS Compliant

Parameter	AC4490-200	AC4490-1000
Interface	20-pin mini connector	20-pin mini connector
Frequency*	902-928 MHz (U.S)**	902-928 MHz (U.S)**
Modulation	FHSS FSK	FHSS FSK
Serial Interface Options	3V or 5V TTL	3V TTL
Serial Interface Data Rate	Up to 115.2 Kbps	Up to 115.2 Kbps
Output Power (w/ 3dBi antenna)	5mW-200mW variable	5mW-1000mW variable
Power Consumption†	68 mA typical @ 200mW	765 mA typical @ 1000mW
Channels	Up to 48 (U.S.)**	Up to 32 (U.S.)**
Security	One-byte system ID, DES	One-byte system ID, DES
Voltage	3.3V-5.5V	pin 10: 3.3V-5.5V pin 11: 3.3V +/-3%
Sensitivity	-99 dB @ full RF data rate	-99 dB @ full RF data rate
Range	Up to 4 miles (6.5 km)	Up to 20 miles (32 km)
Temperature	-40° to +80°C	-40° to +80°C
Humidity (non-condensing)	10% to 90%	10% to 90%
Dimensions	1.90 x 1.65 x 0.20 inches (49 x 42 x 5 mm)	1.90 x 1.65 x 0.20 inches (49 x 42 x 5 mm)
Weight	< 0.75 oz (< 21 g)	< 0.75 oz (< 21 g)
Antenna	Integrated and external dipole	External dipole

* The 900MHz frequency band is approved in the Americas and Australia an an unlicensed spectrum subject to approval by device.
** For products and specifications suited to non-U.S. countries, please contact AeroComm directly.
† Power consumption assumes 50% transmitter on-time.

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	AeroComm Part No.	Description	Price Each 1	Price Each 50
5mW-200mW Variable Modules				
814-AC4490-200M	AC4490-200M	900 MHz FHSS module w/ MMCX ant. connector, RS232	62.50	58.50
814-AC4490-200A	AC4490-200A	900 MHz FHSS module w/ integral ant., RS232	63.85	59.50
814-AC4490200M5485	AC4490-200M-485	900 MHz FHSS module w/ MMCX ant. connector, RS485	63.50	59.20
5mW-1000mW Variable Modules				
814-AC4490-1000M	AC4490-1000M	900 MHz FHSS module w/ MMCX ant. connector	77.50	73.50
814-AC44901000M485	AC4490-1000M-485	900 MHz FHSS module w/ MMCX ant. connector, RS485	78.50	74.50

900 MHZ AC4790 SERIES - PEER/PEER PROTOCOL

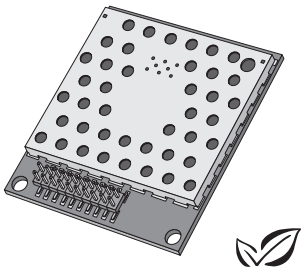
High-performance AC4790 transceivers utilize AeroComm's "masterless" protocol, allowing each transceiver to communicate with any other in-range transceiver for true peer-to-peer operation.

Using field-proven 900MHz FHSS technology that needs no additional site licensing*, AC4790s reject interference, enable co-located system operation, increase output power and maintain data integrity.

AC4790's protocol features a dynamic addressing scheme, which simplifies the most efficient transmission path, so OEMs can design routing sequences that optimize the RF network. This makes AC4790 ideal for a wide variety of RF network. This makes AC4790 ideal for a wide variety of industrial applications that must rely on smooth, constant data flow.

Features:

- True peer-to-peer protocol
- Small form factor: 1.65 x 1.9 inches
- API commands to control packet routing
- Software-controlled sensitivity
- Remote radio discover
- Variable output power: 5mW to 1000mW



RoHS Compliant

Parameter	AC4790-200	AC4790-1000
Interface	20-pin mini connector	20-pin mini connector
Frequency*	902-928 MHz (U.S)**	902-928 MHz (U.S)**
Modulation	FHSS FSK	FHSS FSK
Serial Interface Options	3V or 5V TTL	3V TTL
Serial Interface Data Rate	Up to 115.2 Kbps	Up to 115.2 Kbps
Output Power (w/ 3dBi antenna)	5mW-200mW variable	5mW-1000mW variable
Power Consumption†	68 mA typical @ 200mW	765 mA typical @ 1000mW
Channels	Up to 48 (U.S.)**	Up to 32 (U.S.)**
Security	One-byte system ID, DES	One-byte system ID, DES
Voltage	3.3V-5.5V	3.3V
Sensitivity (adjustable)	-99 dB @ full data rate	-99 dB @ full data rate
Range (line-of-sight)	Up to 4 miles (up to 6.5 km) with external antenna	Up to 20 miles (up tp 32 km) with high-gain antenna
Temperature	-40° to +80°C	-40° to +80°C
Humidity (non-condensing)	10% to 90%	10% to 90%
Dimensions	1.90 x 1.65 x 0.20 inches (49 x 42 x 5 mm)	1.90 x 1.65 x 0.20 inches (49 x 42 x 5 mm)
Weight	< 0.75 oz (< 21 g)	< 0.75 oz (< 21 g)
Antenna	Integrated or external dipole††	External dipole††

* The 900MHz frequency band is approved in the Americas and Australia an an unlicensed spectrum subject to approval by device.
** For products and specifications suited to non-U.S. countries, please contact AeroComm directly.
† Power consumption assumes 50% transmitter on-time.
†† Higher-gain antennas optional.

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	AeroComm Part No.	Description	Price Each 1	Price Each 50
5mW-200mW Variable Modules				
814-AC4790-200M	AC4790-200M	900 MHz FHSS module w/ MMCX ant. connector, RS232	62.50	58.50
814-AC4790-200A	AC4790-200A	900 MHz FHSS module w/ integral ant., RS232	63.85	59.50
5mW-1000mW Variable Modules				
814-AC4790-1000M	AC4790-1000M	900 MHz FHSS module w/ MMCX ant. connector, RS232	77.50	73.50
814-AC47901000M485	AC4790-1000M-485	900 MHz FHSS module w/ MMCX ant. connector, RS485	78.50	74.50

900 MHZ WIRELESS TRANSCEIVER MODULE DEVELOPMENT KITS AND ANTENNAS

AeroComm provides a complete development environment to help you integrate and test RF communication in a matter of minutes.

Development Kits Include:

- 2 Transceivers
- 2 Adapter Boards
- Software Utilities
- 2 AC Power Adapters
- 2 DB9 serial cables
- 2 USB cables
- 2 Dipole Antennas
- Documentation

System Requirements:

- Win® 95, 98, ME, NT, XP, or 2K
- Two PCs each with one serial port, or one PC with two serial ports

Development Kit

MOUSER STOCK NO.	AeroComm Part No.	Description	Price Each
AC4490 Series - Server/Client Protocol			
814-SDKAC4490200M	SDK-AC4490-200M	AC4490-200M-3 Developer Kit	199.95
814-SDKAC4490200A	SDK-AC4490-200A	AC4490-200A-3 Developer Kit	199.95
814-SDKAC44901000M	SDK-AC4490-1000M	AC4490-1000M-3 Developer Kit	199.95
AC4790 Series - Peer/Peer Protocol			
814-SDK-AC4790-200M	SDK-AC4790-200M	AC4790-200M Developer Kit	199.95
814-SDK-AC4790-200A	SDK-AC4790-200A	AC4790-200A Developer Kit	199.95
814-SDK-AC47901000M	SDK-AC4790-1000M	AC4790-1000M Developer Kit	199.95

900 MHZ ANTENNAS AND ACCESSORIES

814-0600-00019	0600-00019	1/2 wave, 7" Swivel, 2dBi, RA, MMCX plug	16.00
814-0600-00025	0600-00025	1/2 wave, 7", 2dBi, MMCX plug	16.00
814-0600-00024	0600-00024	1/2 wave, 7", 2dBi, RA, RPSMA	16.00
814-0600-00027	0600-00027	1/2 wave, 7", 2dBi, RPSMA	16.00
814-0700-00012	0700-00012	SAMTEC 20 pin mating connector	4.00
814-0650-00005	0650-00005	Power Supply, 7.5 VDC, 1.5A, 100-240 VAC	20.00
814-1300-00023	1300-00023	5" RG178 cable, RA MMCX plug to RP SMA bulkhead	14.00

AEROCOMM Embedded Wireless Modules

AEROCOMM

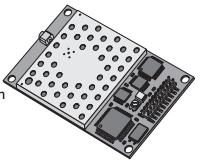
Products may be RoHS compliant.
Check mouser.com for RoHS status.

2.4 GHZ AC4424 SERIES - WIRELESS TRANSCEIVER MODULES, FLEXIBLE PROTOCOL

AC4424 is a 2.4GHz FHSS digital transceiver that represents a breakthrough in industrial RF communication. Comprised of a complete, agency-certified radio and sophisticated RF232® protocol, AC4424 simplifies the OEM's design effort and assures successful field operation.

RF232 makes AC4424 a drop-in module for seamless integration, easy operation and fast time-to-market. As each transceiver receives raw data, it manages protocol over-the-air to assure successful transmissions. Headers, data packet length and CRCs are not needed. The process is transparent to the OEM.

AC4424 modules are socket-compatible with AeroComm's 900MHz AC4490 transceivers, enabling OEMs to design once and subsequently interchange radios to accommodate new markets, regulations and environments.✻ Developer tools and support back every transceiver line.



✻Although AC4424s will not talk to AC4490s, socket-compatibility allows for seamlessly interchanging the modules network-wide.
✻✻Power consumption assumes 50% transmitter on-time.
† 32 channels in U.S.; 16 channels in Spain, 16 channels in France.

RoHS Compliant

Parameter	AC4424-10	AC4424-100	AC4424-200
Interface	20-pin mini connector	20-pin mini connector	20-pin mini connector
Frequency	2.402 - 2.478 GHz	2.402 - 2.478 GHz	2.402 - 2.478 GHz
Modulation	FHSS FSK	FHSS FSK	FHSS FSK
Serial Interface Options	3V or 5V TTL	3V or 5V TTL	3V or 5V TTL
Serial Interface Data Rate	Up to 192 Kbps	Up to 192 Kbps	Up to 192 Kbps
Output Power	10mW	100mW	200mW
Power Consumption✻✻	115/90 mA	160/85 mA	260/90 mA
Sleep Mode	15 mA	15 mA	15 mA
Channels	4 sets of 16†	4 sets of 16†	4 sets of 16†
Security	One-byte system ID, DES	One-byte system ID, DES	One-byte system ID, DES
Voltage	5 V nominal ±2% ± 5 mV ripple	5 V nominal ± 2% ± 5 mV ripple	5 V nominal ± 2% ± 5 mV ripple
Sensitivity	-100 dB @ full RF data rate	-100 dB @ full RF data rate	-100 dB @ full RF data rate
Range	Up to 0.5 mile (1 km)	Up to 1 mile (2 km)	Up to 2 miles (3 km)
Temperature	-40° to +80°C	-40° to +80°C	-40° to +80°C
Humidity	10% to 90%	10% to 90%	10% to 90%
Dimensions	1.65 x 2.65 x 0.20 inches (6.7 x 4.2 x 0.5 cm)	1.90 x 2.65 x 0.20 inches (6.7 x 4.2 x 0.5 cm)	1.90 x 2.65 x 0.20 inches (6.7 x 4.2 x 0.5 cm)
Weight	< 0.7 oz (< 20 g)	< 0.7 oz (< 20 g)	< 0.7 oz (< 20 g)
Antenna	MMCX receptacle	MMCX receptacle	MMCX receptacle

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	AeroComm Part No.	Description	Price Each 1	Price Each 50
814-AC4424-10	AC4424-10	2.4GHz OEM Transceiver, 5V TTL Serial, 10mW	92.00	90.00
814-AC4424-10A	AC4424-10A	2.4GHz OEM Transceiver, 5V TTL Serial, 10mW, integral ant.	95.00	93.00
814-AC4424-100	AC4424-100	2.4GHz OEM Transceiver, 5V TTL Serial, 100mW	98.00	95.00
814-AC4424-200	AC4424-200	2.4GHz OEM Transceiver, 5V TTL Serial, 200mW	99.00	97.00

2.4 GHZ WIRELESS TRANSCEIVER MODULE DEVELOPMENT KITS, ANTENNAS, AND ACCESSORIES

AeroComm provides a complete development environment to help you integrate and test RF communication in a matter of minutes.

Development Kits Include:
- 2 Transceivers
- 2 Adapter Boards
- Software Utilities
- 2 AC Power Adapters
- 2 DB9 serial cables
- 2 USB cables
- 2 Dipole Antennas
- Documentation

System Requirements:
- Win® 95, 98, ME, NT, XP, or 2K
- Two PCs each with one serial port, or one PC with two serial ports

For quantities of 10 and up, call for quote.

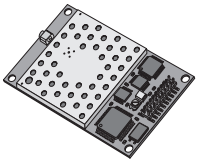
MOUSER STOCK NO.	AeroComm Part No.	Description	Price Each
2.4 GHz Development Kits			
814-SDK-AC4424-10	SDK-AC4424-10	AC4424-10 Developer Kit	199.95
814-SDK-AC4424-10A	SDK-AC4424-10A	AC4424-10A Developer Kit	199.95
814-SDK-AC4424-100	SDK-AC4424-100	AC4424-100 Developer Kit	199.95
814-SDK-AC4424-200	SDK-AC4424-200	AC4424-200 Developer Kit	199.95
2.4 GHz Antennas			
814-0600-00002	0600-00002	1/2 wave, 5", 2dBi, RA, MMCX plug	15.00
814-0600-00008	0600-00008	1/2 wave, 5", 2dBi, MMCX plug	15.00
814-0600-00014	0600-00014	1/2 wave, 5", 2dBi, RA, RPSMA	15.00
814-0600-00012	0600-00012	7", 5dBi, RA, MMCX plug	16.00
814-0600-00011	0600-00011	7", 5dBi, MMCX plug	16.00
814-0600-00010	0600-00010	7", 5dBi, RA, RPSMA	16.00
814-2150-00006	2150-00006	NZH2400 microstrip antenna	10.00
814-1300-00023	1300-00023	5" RG178 coax, RA MMCX plug to RPSMA bulkhead	14.00
2.4 GHz Accessories			
814-0700-00012	0700-00012	Samtec 20-pin mating connector for AC4424 and AC4490	4.00
814-0650-00005	0650-00005	Power Supply, 7.5 VDC, 1.5A, Sw. Reg, 100-240 VAC	20.00

868 MHZ AC4486/4868 SERIES - WIRELESS TRANSCEIVER MODULES

Compact 868MHz✻ transceivers can replace miles of cable in harsh environments. Using field-proven RF technology which needs no additional ETSI (Europe) licensing, OEMs with little or no previous RF experience can easily and quickly make existing systems wireless.

Modules features drop-in installation and a number of on-the-fly control commands, providing OEMs with a versatile interface. They can be used as direct wire replacements, requiring no special host software for communication. All synchronization, and RF system data transmission/reception is performed by the transceiver. The modules are socket-compatible✻✻ with AeroComm's 900MHz AC4490 modules and 2.4GHz AC4424 models to allow for interchanging the network's frequency. This preserves OEMs' hardware/software investments while providing solutions that meet different markets and regulations.

NEW FROM SUPPLIER



✻The 868MHz frequency band is approved in Europe as an unlicensed spectrum subject to approval by device.
✻✻Although AC4486/4868 radios will not talk to AC4490 radios, socket-compatibility allows for interchanging the modules network-wide.

RoHS Compliant

Parameter	ACE6490 Model	ACE6790 Model
Interface	20-pin mini connector	20-pin mini connector
Frequency ✻	869.70 – 869.65MHz ✻	869.40 – 869.65MHz ✻
Modulation	FSK	SF FSK
Serial interface options	3V TTL	3V TTL
Serial interface data rate	Up to 115.2 Kbps	Up to 57.6 Kbps
Output power (w/ 2dBi ant.)	5mW variable	250mW variable
Power consumption	40mA/30mA (transmit/receive)	240mA/36mA (transmit/receive)
Security	One-byte system ID	One-byte system ID
Sensitivity (w/ 2dBi ant.)	-100 dB typical @ 76.8 Kbps	-103 dBm typical @28.8 Kbps
Voltage	3.3V nominal ±2%, +/-30mV	Pin 10: 3.3-5.5V ±50mV ripple Pin 11: 3.3V ±3%, ±100mV ripple
Range	Up to 1000 meters	Up to 15 kilometers
Temperature	-40o to +80ºC	-40o to +80ºC
Humidity	10% to 90%	10% to 90%
Dimensions	1.90 x 1.65 x 0.20 inches (49 x 42 x 5 mm)	1.90 x 1.65 x 0.20 inches (49 x 42 x 5 mm)
Weight	< 0.75 oz (< 21 g)	< 0.75 oz (< 21 g)
Antenna	External MMCX connector	External MMCX connector

MOUSER STOCK NO.	AeroComm Part No.	Description	Price Each 1	Price Each 50
5mW Variable Modules				
814-AC4486-5M	AC4486-5M	868MHz transceiver, TTL serial RS232, 0–250mW, MMCX antenna	58.45	55.00
814-AC4486-5A	AC4486-5A	868MHz transceiver, TTL serial RS232, 0–250mW, integral antenna	60.35	57.00
250mW Variable Modules				
814-AC4868-250M	AC4868-250M	868MHz transceiver, TTL serial RS232, 0–250mW, MMCX antenna	78.65	75.00

868 MHZ WIRELESS TRANSCEIVER MODULE DEVELOPMENT KITS, ANTENNAS, AND ACCESSORIES

AeroComm provides a complete development environment to help you integrate and test RF communication in a matter of minutes.

Development Kits Include:
- 2 Transceivers
- 2 Adapter Boards
- Software Utilities
- 2 AC Power Adapters
- 2 DB9 serial cables
- 2 USB cables
- 2 Dipole Antennas
- Documentation

System Requirements:
- Win® 95, 98, ME, NT, XP, or 2K
- Two PCs each with one serial port, or one PC with two serial ports

NEW FROM SUPPLIER

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	AeroComm Part No.	Description	Price Each
868 MHz Development Kits			
814-SDK-AC4486-5M	SDK-AC4486-5M	AC4486-5M Development Kit	199.95
814-SDK-AC4486-5A	SDK-AC4486-5A	AC4486-5A Development Kit	199.95
814-SDK-AC4868-250M	SDK-AC4868-250M	AC4868-250M Development Kit	199.95
868 MHz Antennas			
814-0600-00020	0600-00020	1/2 Wave Antenna, 7", 2dBi, RA, MMCX plug	16.00
814-1300-00023	1300-00023	5" RG178 Coax Cable, RA MMCX plug to RPSMA bulkhead	14.00
868 MHz Accessories			
814-0700-00012	0700-00012	Samtec 20-pin mating connector	4.00
814-0650-00005	0650-00005	Power Supply, 7.5 VDC, 1.5 A, Sw. Reg., 100-240 VAC Input	20.00

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AEROCOMM Wireless Modules

900MHZ / 2.4 GHZ CONNEX LINK™

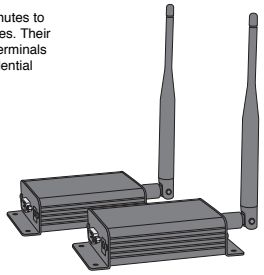
Parameter	CL4490-1000	CL4790-1000	CL4424-100
Network Architecture	Server/Client	True Peer-to-Peer	Server/Client
Standard Interface	RS232 (DB9 male)	RS232 (DB9 male)	RS232 (DB9 male)
Frequency Band	902-928 MHz	902-928 MHz	2.402-2.478 GHz
Modulation	FHSS FSK	FHSS FSK	FHSS FSK
Serial Interface Data Rate	Up to 115.2 Kbps	76.8 Kbps Fixed	Up to 288 Kbps
Output Power	1000mW variable	1000mW variable	100mW fixed
Input Voltage	7VDC to 18VDC	7VDC to 18VDC	7VDC to 18VDC
Power Draw (@ 12Vdc)	400mATX, 40mARX	400mATX, 40mARX	125mATX, 80mARX
Channels	Up to 32	Up to 32	64 in U.S., 32 in Europe
Security	1-byte system ID, DES	1-byte system ID, DES	1-byte system ID
Sensitivity	-99 dB @ full RF data rate	-100 dB @ full RF data rate	-90 dB @ full RF data rate
Range (line-of-sight)	Up to 20 miles (32 km)	Up to 20 miles (32 km)	Up to 2 miles (3.2 km)
Temperature	-40°to +80°C	-40°to +80°C	-40°to +80°C
Humidity (non-condensing)	10% to 90%	10% to 90%	10% to 90%
Dimensions	4.75 x 2.75 x 1.17 inches (121 x 70 x 30 mm)	4.75 x 2.75 x 1.17 inches (121 x 70 x 30 mm)	4.75 x 2.75 x 1.17 inches (121 x 70 x 30 mm)
Antenna connector	Dipole RPSMA jack	Dipole RPSMA jack	Dipole RPSMA jack

ConnexLink stand-alone transceivers can be set up in minutes to virtually cut the cables between RS232 or RS485✻ devices. Their flexibility and price allow users to quickly upgrade wired terminals to cordless operation in industrial, commercial, even residential applications.

✻ RS485 versions available upon request.

ConnexLink Highlights:

- Durable industrial-grade enclosure
- Transmits around corners, through walls
- Reliable communication up to 288 Kbps
- Point-to-point & point-to-multipoint setups
- Quickly replace serial cable in both old and new equipment
- Move links from machine to machine without costly rewiring
- CL4790-1000 can be used for True Peer to Peer Protocol



For quantities greater than listed, call for quote.

MOUSER STOCK NO.	AeroComm Part No.	Description	Price Each
900 MHz Models - 1000mW- Server/Client Protocol			
814-CL4490-232-C	CL4490-1000-232	Client Only Unit Kit includes Transceiver (Client Config.), RS-232 cable, Antenna, Power Supply and Software (Requires a Server Unit)	110.00
814-CL4490-232-SP	CL4490-1000-232-SP	Starter Pack includes both a Server and Client Unit, RS-232 cables, Antennas, Power Supplies and Software	225.00
900 MHz Models - 1000mW- Peer-to-Peer Protocol			
814-CL4790-232	CL4790-1000-232	Single Unit Kit (Peer to Peer Protocol) includes Transceiver, RS-232 cable, Antenna, Power Supply and Software	110.00
814-CL4790-232-SP	CL4790-1000-232-SP	Starter Pack (Peer to Peer Protocol) includes Two Transceiver Units, RS-232 cables, Antennas, Power Supplies and Software	225.00
2.4 GHz Models - 100mW- Server/Client Protocol			
814-CL4424-232-C	CL4424-100-232	Client Only Unit Kit includes Transceiver (Client Config.), RS-232 cable, Antenna, Power Supply and Software (Requires a Server Unit)	184.00
814-CL4424-232-SP	CL4424-100-232-SP	Starter Pack includes both a Server and Client Unit, RS-232 cables, Antennas, Power Supplies and Software	368.00
Connex Link™ Accessories			
814-2200-00076	2200-00076	CL4424-100-232 PC Board only RS-232 with DB-9 (No Package)	140.00
814-2200-00122	2200-00122	CL4490-1000-232 PC Board only RS-232 with DB-9 (No Package)	100.00
814-1300-00032	1300-00032	Null-Modem Cable (replaces standard cable if connecting Aerocomm units to DCE devices)	14.00
814-0600-00031	0600-00031	5dBi antenna with 6" flying lead, 900MHz, Nearson S151	30.00

900MHZ FHSS CONNEXNET™

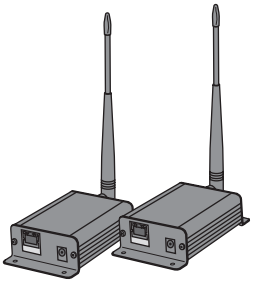
Parameter	CN4790-1000	CN4490-1000
Architecture	Peer-to-Peer	Server/Client
Network Interface Standard	IEEE 802.3	IEEE 802.3
Physical Layer	10/100BaseT	10/100BaseT
Mode	Half-duplex and full-duplex	Half-duplex and full-duplex
Interface Connector	RJ-45	RJ-45
Frequency Band	902-928 MHz	902-928 MHz
Modulation	FHSS FSK	FHSS FSK
Serial Interface Data Rate	Up to 115.2 Kbps	Up to 115.2 Kbps
Output Power	1000mW variable	1000mW variable
Input Power	7VDC to 18VDC	7VDC to 18VDC
Power Draw (@ 12Vdc)	400mA TX, 40mA RX	400mA TX, 40mA RX
Power Supply	AC transformer	AC transformer
Channels	Up to 32	Up to 32
Security	1-byte system ID, DES	1-byte system ID, DES
Sensitivity	-99 dB @ full RF data rate	-99 dB @ full RF data rate
Range (line-of-sight)	Up to 20 miles (32 km)	Up to 20 miles (32 km)
Temperature	-40° to +80°C	-40° to +80°C
Humidity (non-condensing)	10% to 90%	10% to 90%
Dimensions	4.75 x 2.75 x 1.17 in. (121 x 70 x 30 mm)	4.75 x 2.75 x 1.17 in. (121 x 70 x 30 mm)
Weight	< 6 oz (< 170 g)	< 6 oz (< 170 g)
Antenna Connector	Dipole RPSMA jack	Dipole RPSMA jack

ConnexNet provides a complete hardware and software solution for adding wireless network connectivity to serial-based applications. The transceiver serves as a conduit between the user and multiple destination devices via a local network or Internet connection. It integrates a fully developed TCP/IP network stack and OS using a variety of network protocols to make distant networking both easy and reliable.

Each unit is small and easily portable for use in mobile and temporary settings as well as for fixed installations. ConnexNet software enables custom configurations based on unique application requirements, and simplifies installation and setup. The network settings can be configured remotely over a network (password protected).

ConnexNet Highlights:

- Wireless LAN service supporting Ethernet interface
- Comprehensive networking protocols
- Equipped with a CPU, real-time OS , TCP/IP stack
- Provides control from virtually anywhere via the Internet
- Wireless serial (RS232) to Ethernet bridge



Ethernet Protocols	
Function	**Protocols**
Network Communication	ARP, UDP, TCP, ICMP, TelNet, TFTP AutoIP, DHCP, HTTP, SNMP
Connections to Serial Port	TCP, UDP, PPP, TelNet
Firmware Update	TFTP
Addressing, Routing, Data Block	IP

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	AeroComm Part No.	Description	Price Each
Server/Client Protocol			
814-CN4490-1000	CN4490-1000	ConnexNet Ethernet Transceiver for (server/client protocol) - includes Antenna and Power Supply ✻	212.00
814-CN4490-232-SP	CN4490-1000-232-SP	Starter Pack - includes one ConnexNet and one ConnexLink RS232 serial unit CN4490-1000-232-SP	325.00
Peer-to-Peer Protocol			
814-CN4790-1000	CN4790-1000	Ethernet Transceiver for (peer- to-peer protocol) - includes Antenna and Power Supply✻	212.00
814-CN4790-232-SP	CN4790-1000-232-SP	Starter Pack - includes one ConnexNet and one ConnexLink RS232 serial unit CN4490-1000-232-SP	325.00

✻ Requires a ConnexLink RS232 to make a link.

900MHZ ACE INDUSTRIAL WIRELESS DATA MODEMS

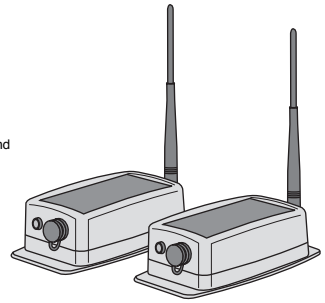
Parameter	ACE6490 Model	ACE6790 Model
Network Architecture	Server/Client	Peer-to-Peer
Standard Interface	RS232	RS232
Frequency, Modulation	902-928 MHz FHSS FSK	902-928 MHz FHSS FSK
Serial Interface Data Rate	Up to 115.2 Kbps	Up to 115.2 Kbps
Output Power	1000mW variable	1000mW variable
Input Power	7Vdc to 26Vdc	7Vdc to 26Vdc
Power Consumption	400mATX, 40mARX	400mATX, 40mARX
Connection	16-pin connector	16-pin connector
Channels	Up to 32	Up to 32
Security	1-byte system ID, DES	1-byte system ID, DES
Sensitivity	-99 dB @ full RF data rate	-99 dB @ full RF data rate
Range (line of sight)	Up to 20 miles (32 km) w/ high-gain antenna	Up to 20 miles (32 km) w/ high-gain antenna
Temperature	-40° to +80°C	-40° to +80°C
Humidity (non-condensing)	10% to 90%	10% to 90%
Dimensions	6.87 x 3.57 x 2.05 inches (175 x 91 x 52 mm)	6.87 x 3.57 x 2.05 inches (175 x 91 x 52 mm)
Antenna connector	Dipole RPSMA jack	Dipole RPSMA jack

AeroComm's ACE RF data modems combine high performance and reliability with heavy-duty packaging designed to withstand harsh environmental conditions-splashing water, corrosive agents, dirt, ice and snow ACEs suit rugged industrial applications where outdoor communications and NEMA-4x ratings are essential. ACEs provide high output power to deliver line-of sight ranges up to 20 miles with high-gain antennas.

ACE modems are completely compatible with AeroComm's AC4490 transceivers and CL4490 commercial modems. This allows OEMs to construct systems which utilize ruggedized devices only where necessary, saving system costs.

ACE Product Highlights:

- NEMA-4x rated packaging
- One full watt of RF output power
- Industrial temp range -40° to +80°C
- Standard interface, RS232



For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	AeroComm Part No.	Description	Price Each
Server/Client Protocol			
814-ACE6490-232	ACE6490-1000-232	ACE 6490 Kit - includes 1 Transceiver, Cable, Antenna, Power Supply and Software	449.00
814-ACE6490-232-SP	ACE6490-1000-232-SP	ACE 6490 Starter Pack - includes 2 Transceivers, Cables, Antennas, Power Supplies and Software	899.00
Peer-to-Peer Protocol			
814-ACE6790-232	ACE6790-1000-232	ACE6790 Kit - includes 1 Transceiver, Cable, Antenna, Power Supply and Software	449.00
814-ACE6790-232-SP	ACE6790-1000-232-SP	ACE 6790 Starter Pack - includes 2 Transceivers, Cables, Anennas, Power Supplies and Software	899.00

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CHIPCON Single-Chip RF Transceivers

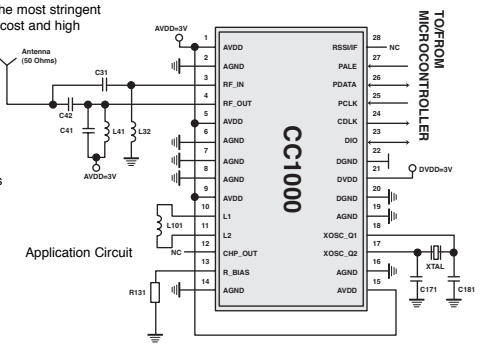
Chipcon Products from Texas Instruments

CC1000/CC1050 ULTRA-LOW POWER UHF TRANSCEIVER/TRANSMITTER CHIPS

The CC1000 is a true ultra-low-power single-chip RF transceiver for the 315, 433, 868, 915 MHz bands. It has been specifically designed to comply with the most stringent demands of the low power radio market. Based on a pure CMOS technology, this is the first product in the market that offers a unique combination of low cost and high integration, performance and flexibility, thus setting a new standard for short-range, wireless communication.

Features:
- Single-chip RF transceiver
- Programmable frequency: 300-1000MHz
- Very low current consumption: Rx: 7.4mA
- Very few external components required
- FSK modulation spectrum shaping (optional)
- Low supply voltage: 2.1-3.6V
- High receiver sensitivity: -110dBm
- RSSI output
- FSK data rate up to 76.8kBaud
- Programmable output power: -20 to 10dBm
- Crystal temperature drift compensation possible without use of external TCXO
- Programmable frequency in 250Hz steps
- Suitable for frequency hopping protocols
- No external RF switch /IF filter required
- Integrated bit synchronizer
- Single-port antenna connection
- Small 28-pin TSSOP package
- Complies with EN 300220 and FCC CFR 47, part 15

Applications:
- Home automation
- Remote keyless entry
- Automatic meter reading
- Wireless alarm and security systems
- Toys and PDAs
- Audio/voice
- 315/433/868/915 MHz SRD band systems



Application Circuit

CC1000/CC1050 Chips

For quantities of 100 and up or for Tape & Reel, call for quote.

MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each 1	Price Each 25
839-CC1000R	CC1000-RTB1	28P TSSOP Transceiver (packaged in tubes)	7.45	6.21
839-CC1050R	CC1050-RTB1	24P TSSOP Transmitter (packaged in tubes)	3.65	2.97

RoHS Compliant

CC1100/CC1050 Development Tools

MOUSER STOCK NO.	Chipcon/TI Part No.	Frequency (MHz)	Description	Price Each
839-1000DK-433	CC1000DK-433MHz	433	Full Development Kit - two programmable radio modules, antennas, PC cables, connectors, documentation, 5 pieces of CC1000 RF Transceiver, 2 pieces of CC1000PP Plug & Play module	469.75
839-1000DK-868	CC1000DK-868/915MHz	868/915	Full Development Kit - two programmable radio modules, antennas, PC cables, connectors, documentation, 5 pieces of CC1000 RF Transceiver, 2 pieces of CC1000PP Plug & Play module	460.00
839-1000PPK-433	CC1000PPK-433MHz	433	Plug & Play Modules - 2 pieces of CC1000PP	129.00
839-1000PPK-868	CC1000PPK-868/915MHz	868/915	Plug & Play Modules - 2 pieces of CC1000PP	120.00

CC1020/CC1021/CC1070 NARROWBAND UHF RF TRANSCEIVER/TRANSMITTER CHIPS

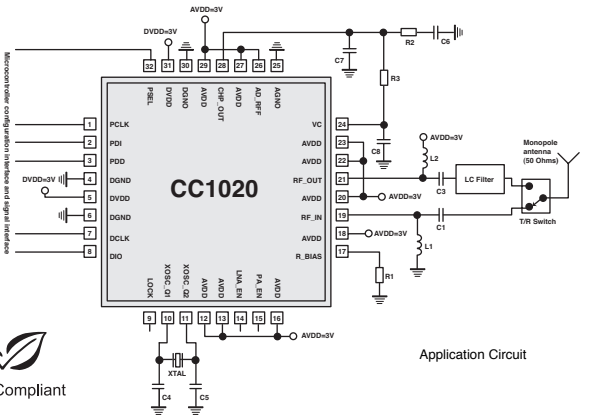
CC1020 Transceiver:
The industry's first single-chip FSK/ASK CMOS RF transceiver for narrowband applications in the 402-470 & 804-940 MHz range.

CC1021 Transceiver:
A multichannel FSK/ASK CMOS RF transceiver for narrowband applications, with channel spacings of 50kHz or higher, in the 402-470 & 804-940 MHz range.

CC1020/CC1021 Key Features:
- Frequency range: 402-470 MHz & 804-940 MHz
- Low current consumption: RX: 17.3mA
- Low supply voltage: 2.3-3.6V
- Very few external components required
- Small size: QFN 32 package
- Single port antenna connection
- Data rate up to 153.6kBaud
- ASK, FSK, and GSFK data modulation
- Complies with EN 300 220, FCC CFR47 part 15, and ARIB STD T-67

CC1070 Transmitter Only:
A true single-chip, low-power, low-cost CMOS FSK/GFSK/ASK/00K RF Transmitter for narrowband and multi-channel applications.

CC1070 Key Features:
- Frequency ranges: 402-470MHz & 804-940MHz
- Low supply voltage: 2.1-3.6V
- Very low current consumption
- Requires very few external components
- Data rate up to 153.6 kbps FSK/GFSK/ASK/OOK modulation formats
- Fully on-chip VCO
- Programmable frequency in steps less than 300Hz makes crystal temperature drift compensation possible without TCXO
- Single port antenna connection
- Complies with EN 300 220, FCC CFR 47 part 15, and ARIB STD-T67



Application Circuit

CC1020/CC1021/CC1070 Chips

For quantities of 100 and up or for Tape & Reel, call for quote.

MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each 1	Price Each 25
839-CC1020R	CC1020-RTB1	32P QFN Transceiver (packaged in tubes)	7.95	7.12
839-CC1021R	CC1021-RTB1	32P QFN Transceiver (packaged in tubes)	6.29	5.48
839-CC1070R	CC1070-RTY1	20P QFN Transmitter Only (packaged in trays)	3.65	3.48

RoHS Compliant

CC1020/CC1021/CC1070 Development Tools

MOUSER STOCK NO.	Chipcon/TI Part No.	Frequency (MHz)	Description	Price Each
839-1020/70DK-433	CC1020/CC1070DK-433MHz	433	Full Development Kit - two CC1020 evaluation boards, two CC1020 evaluation modules, one CC1070 evaluation module, 5 sample pieces of CC1020, 5 sample pieces of CC1070, antennas and adapters	523.13
839-1020/70DK-868	CC1020/CC1070DK-868/915MHz	868/915	Full Development Kit - two CC1020 evaluation boards, two CC1020 evaluation modules, one CC1070 evaluation module, 5 sample pieces of CC1020, 5 sample pieces of CC1070, antennas and adapters	523.13
839-1020EMXK-433	CC1020EMXK-433MHz	433	Evaluation Module	140.00
839-1020EMXK-868	CC1020EMXK-868MHz	868/915	Evaluation Module	140.00

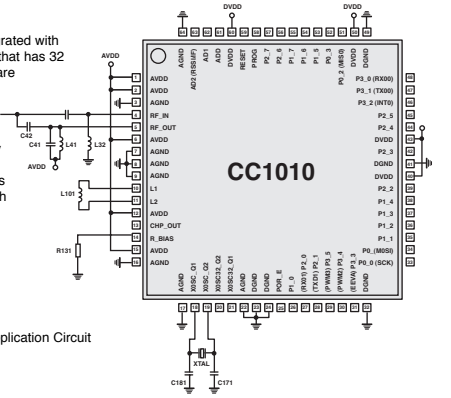
CC1010 UHF RF TRANSCEIVER WITH ONBOARD 8051 MICROCONTROLLER CHIP

The industry's first truly complete RF System-on-Chip solution! On a single die, the award winning 300-1000MHz CMOS CC1000 RF Transceiver has been integrated with an industry standard 8051 microcontroller core. The CC1010 integrates a very low-power 300-1000MHz RF Transceiver and a 8051-Compatible Microcontroller that has 32 kB in-system programmable Flash, hardware DES encryption/decryption and a three channel 10-bit ADC. This means only a few external passive components are necessary to make a powerful embedded system with wireless communication capabilities, sensor interfacing possibilities, and a lot of processing power.

CC1010 Key Features:
- Programmable frequency range: 300-1000MHz
- High sensitivity: typically -107dBm @ 1.2. kbit/s
- Programmable output power: -20 to 10dBm
- Very low current consumption: RX: 9.1mA
- No external RF switch or IF filter required
- Fast PLL settling allows frequency hopping protocols
- FSK modulation with a data rate of up to 76.8kbit/s
- RSSI output which can be sampled by on-chip ADC
- Complies with EN 300 220 and FCC CFR47 part 15

8051-Compatible Microcontroller:
- High performance, 24MHz, low power
- Optimized 8051-core typically gives 2.5x the performance of a standard 8051
- Dual data pointers
- Idle and sleep modes
- In-circuit interactive debugging is supported for the Keil™ iVision IDE through a simple serial interface

Data & Non-volatile program memory:
- 32kB of non-volatile Flash memory in-system programmable through a simple SPI interface or by the 8051 core
- Typical Flash endurance: 20,000 write/erase cycles
- Programmable read & write lock of portions of Flash memory for software security
- 2048 + 128 Byte of internal SRAM



Application Circuit

CC1010 Chips

For quantities of 100 and up or for Tape & Reel, call for quote.

MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each 1	Price Each 25
839-CC1010R	CC1010-RTY1	64P TQFP Transceiver (packaged in tubes)	10.53	9.60

RoHS Compliant

CC1010 Development Tools

MOUSER STOCK NO.	Chipcon/TI Part No.	Frequency (MHz)	Description	Price Each
839-1010DK-433	CC1010DK-433MHz	433	Full Development Kit - one CC1010EB evaluation board, two CC1010 evaluation modules, Keil uVision2 IDE (eval. version), 5 pieces of CC1010, cables, adapters and antennas	575.00
839-1010DK-868	CC1010DK-868/915MHz	868/915	Full Development Kit - one CC1010EB evaluation board, two CC1010 evaluation modules, Keil uVision2 IDE (eval. version), 5 pieces of CC1010, cables, adapters and antennas	575.00
839-1010EMK-433	CC1010EMK-433MHz	433	Evaluation Module Kit - two CC1010EM evaluation modules and two antennas	280.00
839-1010EMK-868	CC1010EMK-868/915MHz	868/915	Evaluation Module Kit - two CC1010EM evaluation modules and two antennas	280.00

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CHIPCON Single-Chip RF Transceivers

Chipcon Products from Texas Instruments

CC1100/CC1150 LOW-COST UHF RF TRANSCEIVER/TRANSMITTER CHIPS

The CC1100 multi-channel RF transceiver is the world's lowest total system cost radio intended for use in the 315, 433, 868, and 915 MHz frequency bands. With its very low power consumption and excellent radio performance, the CC1100 is a perfect solution for applications in for instance home and building automation, wireless alarm and security systems, and consumer electronics, to mention a few. The CC1100 transceiver is based on Chipcon's latest product platform, the SmartRF®04 Technology, which is built upon an advanced 0.18µm CMOS technology facilitating superior RF performance in combination with high-density and low-power integration of digital modules.

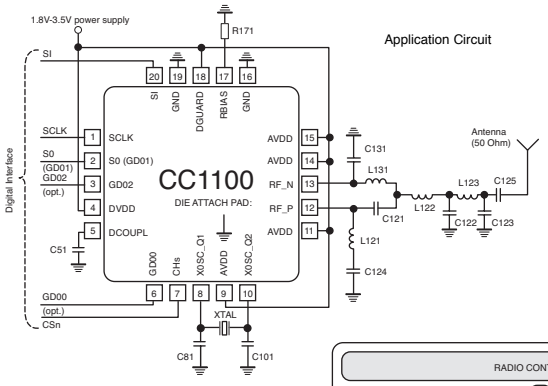
Features:
- Market's lowest system cost.
- Very few external components required.
- Very small footprint. The CC1100 comes in a 4x4mm, 20-pin QLP package.
- Reference design with two-layer PCB and all components mounted on the same side.
- CC1100's many powerful digital features make it easy to build a high-performance RF system using an inexpensive microcontroller.

Excellent Radio Performance:
- High sensitivity: -110dBm @ 1.2kbps
- Programmable data rate from 1.2-500kbps.
- Robust solution with excellent selectivity and blocking performance.
- Programmable output power up to +10dBm for all supported frequency bands.
- Ideal for multichannel operation: 50-500kHz channels

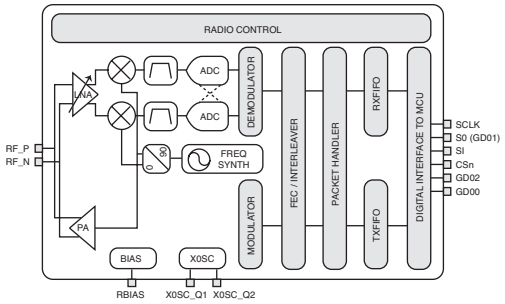
Very low power consumption:
- RX: 15.6mA, TX: 28.8mA @ +10dBm output power, Powerdown: 400mA.
- Burst mode data transmission with high over-the-air data rate reduces current consumption.
- Automatic RX polling using Wake-on-Radio: 1.8µA.

Applications:
- Home and building automation
- Automatic meter reading (AMR)
- Wireless alarm and security systems
- Industrial monitoring and control
- Wireless sensor networks
- Consumer electronics
- Ultra low-power wireless applications.
- Operating in the 315, 433, 868, 915 MHz ISM/SRD bands

Application Circuit



Block Diagram



RoHS Compliant

CC1100/CC1150 Chips

For quantities of 100 and up or for Tape & Reel, call for quote.

MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each 1	Price Each 25
839-CC1100	CC1100-RTY1	20 Pin QLP Transceiver (packaged in tray)	3.96	3.33
839-CC1150	CC1150-RTY1	16 Pin QLP Transmitter Only (packaged in tray)	2.39	1.98

CC1100/CC1150 Development Tools

MOUSER STOCK NO.	Chipcon/TI Part No.	Frequency (MHz)	Description	Price Each
839-1100/50DK-433	CC1100_CC1150DK-433MHz	433	Full Development Kit - two SmartRF®04 evaluation boards, two CC1100EM evaluation modules, one CC1150EM evaluation module, antennas and cables	510.00
839-1100/50DK-868	CC1100_CC1150DK-868MHz	868/915	Full Development Kit - two SmartRF®04 evaluation boards, two CC1100EM evaluation modules, one CC1150EM evaluation module, antennas and cables	523.14

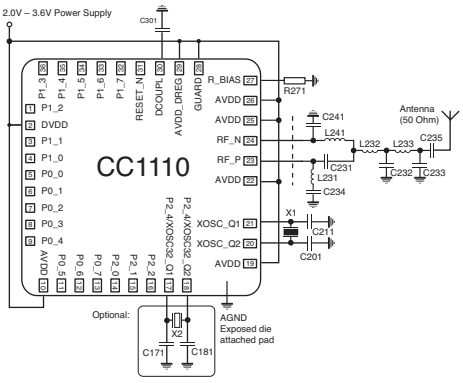
CC1110 UHF RF SOC TRANSCEIVER WITH ONBOARD 8051 MICROCONTROLLER CHIP

The CC1110 is a powerful 315/433/868/915 MHz System-on-Chip designed for low-power and low-voltage wireless communication applications. With a multi-channel 315/433/868/915 MHz radio transceiver, a single-cycle 8051 microcontroller and 32 kB Flash memory, this unique all-in-one device makes it easier than ever to finish your design while offering numerous application possibilities.

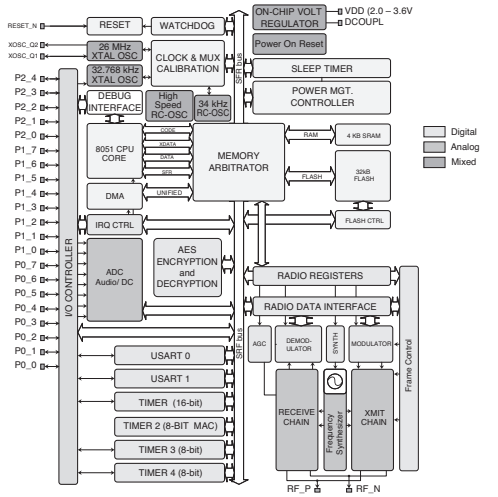
Features:
- High-performance and low-power RF transceiver core – the industry leading CC1100
- High performance and low power 8051microcontroller core, typically with 8 times the performance per MHz of a standard 8051
- 32 kB in-system programmable flash
- 4 kB SRAM (with data retention in all power modes)
- Four flexible power modes for reduced power consumption
- System clock source can be 16 MHz on-chip RC oscillator or 26 MHz crystal oscillator. The 26 MHz oscillator is used when radio is active
- Real time clock with low-power 32.768 kHz crystal oscillator or internal low-power 34 kHz RC-oscillator
- Very fast transition times from sleep modes to active enables ultra low average power consumption °in low duty-cycle systems
- In deep sleep modes the system can wake up on external interrupts or real time counter events
- Excellent receiver selectivity and blocking performance and high sensitivity
- Programmable data rate up to 500 kbps
- 2-FSK, GFSK and MSK supported
- Low current consumption (Total: RX: 22 mA, TX: 23 mA, w/ microcontroller running at 26 MHz)
- Ideal for frequency hopping systems and multichannel operation
- Very few external components: Complete on-chip frequency synthesizer, no external filters or RF switch needed
- 8-14 bits ADC with up to eight inputs
- Wide supply voltage range (2.0V – 3.6V)
- Programmable Watchdog timer
- Power On Reset
- On-chip temperature sensor
- 16-bit timer + three 8-bit timers
- True random number generator
- Hardware debug support
- 21 general I/O pins, two with 20 mA sink/source capacity
- In-circuit interactive debugging

Applications:
- AMR
- Active RF-ID systems
- Alarm & security systems
- Home automation
- Telemetry
- Wireless payment systems

Application Circuit



Block Diagram



RoHS Compliant

CC1110 Chips

For quantities of 100 and up or for Tape & Reel, call for quote.

MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each 1	Price Each 25
839-CC1110	CC1110-RTY1	36Pin QLP Transceiver (packaged in tray)	6.49	5.96

CC1110 Development Tools

MOUSER STOCK NO.	Chipcon/TI Part No.	Freq. (MHz)	Description	Price Each
839-1110DK-433	CC1110DK-433	433	Full Development Kit - two SmartRF® 04 evaluation boards, two CC1110EM evaluation modules, antennas and cables	710.00
839-1110DK-868	CC1110DK-868/915	868/915	Full Development Kit - two SmartRF® 04 evaluation boards, two CC1110EM evaluation modules, antennas and cables	693.00

CHIPCON Single-Chip RF Transceivers

CC2510FX/CC2511FX 2.4 GHZ SOC TRANSCEIVER WITH 8051 MCU

The CC2510Fx/CC2511Fx is a low-cost true system-on-chip (SoC) device designed for low power and low-voltage wireless communication applications. The CC2510Fx/CC2511Fx combines the excellent performance of the state-of-the-art RF transceiver CC2500 with an industry-standard enhanced 8051 MCU, 8/16/32 kB of in-system programmable flash memory, 1/2/4 kB of RAM and many other powerful features. The CC2510Fx/CC2511Fx is available in six different versions: CC2510F8 and CC2511F8 with 8 kB of Flash and 1 kB of AM, the CC2510F16 and CC2511F16 with 16 kB of Flash and 2 kB of RAM, and CC2510F32 and CC2511F32 with 32 kB of Flash and 4 kB of RAM. The CC2510Fx/CC2511Fx is highly suited for systems where very low power consumption is required. This is ensured by several advanced low-power operating modes. The CC2511Fx adds a full-speed USB interface to the feature set of the CC2510Fx. Interfacing to a PC using the USB interface is quick and easy, and the high data rate (12 Mbps) of the USB interface avoids the bottlenecks of RS-232 or low-speed USB interfaces.

Key Features:

- High performance and low power 8051 microcontroller core.
- High-performance CC2500 RF transceiver based on the market-leading CC2500
- Frequency band: 2.4 GHz
- 8/16/32 kB in-system programmable flash
- 1/2/4 kB RAM + 1 kB USB FIFO (CC2511Fx)
- Full-Speed USB Controller (CC2511Fx)
- I2S interface
- 8-14 bits ADC with up to eight inputs
- 128-bit AES security coprocessor
- Powerful DMA functionality
- Two USARTs
- 16-bit timer with configurable mode
- Three 8-bit timers
- Hardware debug support
- 21 (CC2510Fx), 19 (CC2511Fx) GPIO pins
- Wide supply voltage range (2.0V – 3.6V)
- High sensitivity (–100 dBm at 10 kbps)
- Programmable data rate up to 500 kbps
- Low current consumption (RX: 22 mA, TX: 23 mA, with MCU running at 26 MHz)
- MCU current consumption 270iA/MHz
- Programmable output power up to 1 dBm for all supported frequencies
- Digital RSSI / LQI support
- Excellent receiver selectivity and blocking performance
- 0.3 A consumption in lowest power mode
- RoHS compliant 6x6mm QLP36 package

Applications:

- Wireless keyboard and mouse
- Wireless voice-quality audio
- CC2511Fx: USB dongles
- Remote controls
- Wireless sports and leisure equipment
- Point-of-sale systems
- Active RFID and asset tracking systems
- Home and building automation
- Low power telemetry
- 2.4 GHz ISM/SRD band systems

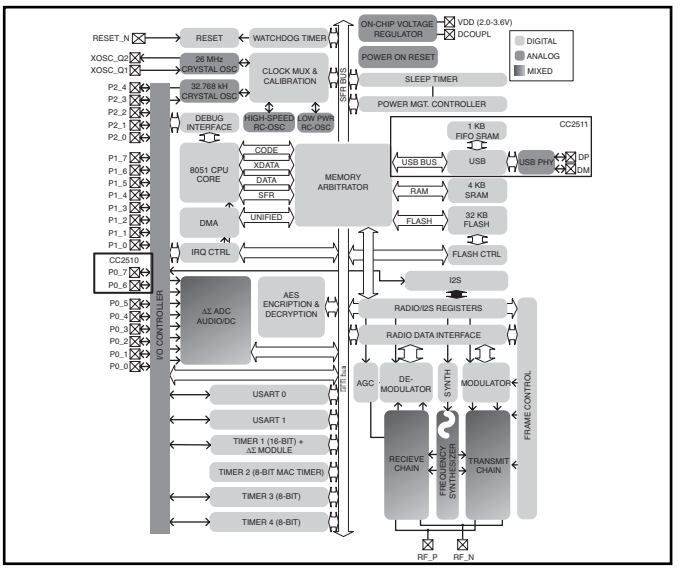
Specifications:

- CC2510Fx Operating Ambient Temperature, TA: -40 Min to 85 Max °C
- CC2510Fx Operating Supply Voltage : 2.0 Min to 3.6 Max V
- CC2511Fx Operating Ambient Temperature, TA: 0 Min to 80 Max °C
- CC2511Fx Operating Supply Voltage : 3.0 Min to 3.6 Max V

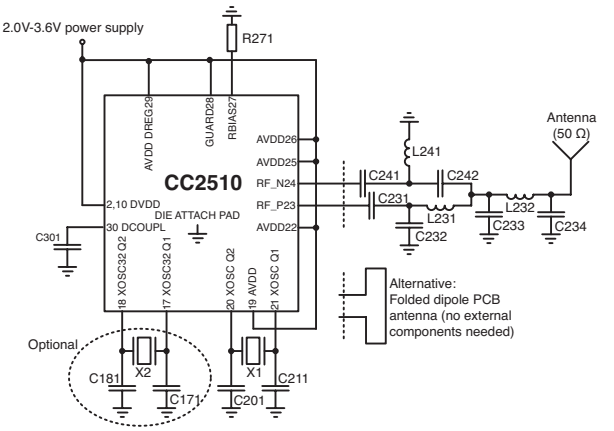
MOUSER STOCK NO.	Chipcon/TI Part No.	Flash kB	RAM kB	Price Each 1	Price Each 25
SOC Transceiver					
839-CC2510F8RSP	CC2510F8RSP	8	1	7.99	7.55
839-CC2510F16RSP	CC2510F16RSP	16	2	9.87	9.25
839-CC2510F32RSP	CC2510F32RSP	32	4	10.61	10.09
SOC Transceiver with on-board USB Interface					
839-CC2511F8RSP	CC2511F8RSP	8	1	8.75	8.49
839-CC2511F16RSP	CC2511F16RSP	16	2	10.05	9.81
839-CC2511F32RSP	CC2511F32RSP	32	4	11.21	9.81

MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each
839-CC2510-CC2511DK	CC2510-CC2511DK	Development Kit	710.00

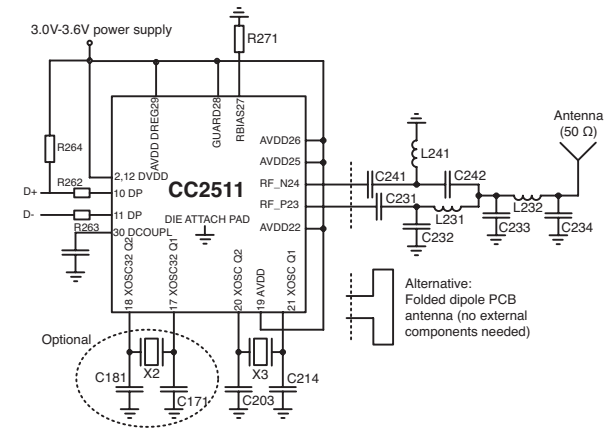
CC2510Fx/CC2511Fx Block Diagram



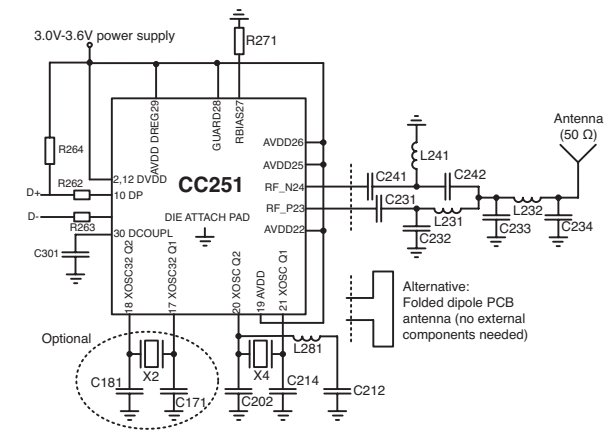
Application Circuit for CC2510Fx



Application Circuit for CC2511Fx with USB and fundamental crystal



Application Circuit for CC2511Fx with USB and 3rd overtone crystal



Overview of external components (excluding supply decoupling capacitors)

Component	Component
C301	Decoupling capacitor for on-chip voltage regulator to digital part
C203/C214	Crystal loading capacitors (fundamental crystal)
C202/C212/C213	Crystal loading capacitors (3rd overtone crystal)
C201/C211	Crystal loading capacitors, see section 14 on page 190 for details
C231/C241	RF balun DC blocking capacitors
C232/C241	RF balun/matching capacitors
C233/C234	RF LC filter/matching capacitors
C181/C171	Crystal loading capacitors if X2 is used.
L231/L241	RF balun/matching inductors (inexpensive multi-layer type)
L232	RF LC filter inductor (inexpensive multi-layer type)
L281	Crystal inductor
R271	56 kΩ resistor for internal bias current reference, 1% tolerance
R264	D+ Pullup resistor
R262/R263	D+ / D- series resistors for impedance matching
X1	26 MHz -27 MHz crystal, see section 14 on page 190 for details
X2	32.768 kHz crystal, optional
X3	48 MHz crystal (fundamental)
X4	48 MHz crystal (3rd overtone)

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CHIPCON Single-Chip RF Transceivers

Chipcon Products from Texas Instruments

CC2500/CC2550 2.4 GHZ LOW COST RF TRANSCEIVER/TRANSMITTER CHIPS

The CC2500 is a highly integrated multichannel RF transceiver designed for low-power wireless applications in the 2.4GHz Industrial Scientific Medical (ISM) band. The CC2500 is part of Chipcon's SmartRF04 Technology platform based on an advanced 0.18µm CMOS technology facilitating superior RF performance in combination with high-density and low-power integration of digital modules. The CC2500 can be used in a wide range of applications, such as wireless game controllers, wireless keyboard/mouse, consumer electronics, wireless audio, and sports, and leisure equipment.

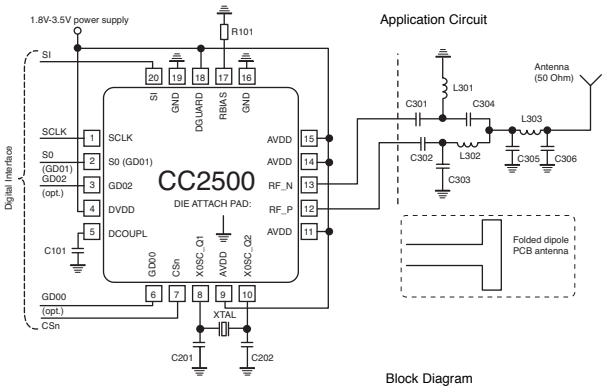
Key Features:
- Market's lowest system cost.
- Very low unit price per chip.
- Very few external components required; all are low cost type.
- Reference design with two layer PCB with all components mounted on the same side.
- Very small footprint. The CC2500 comes in a 4x4mm, 20-pin QFP package.
- CC2500's many powerful digital features allow building a high-performance. RF system using an inexpensive microcontroller.

Very Low Power Consumption:
- RX: 15.6mA, TX: 21.6mA @ 0dBm output power
- Burst mode data transmission with high over-the-air data rate reduces current consumption.

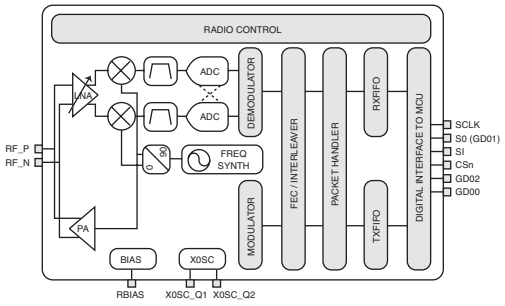
Excellent Radio Performance:
- High sensitivity (PER: -98dBm @ 10kbps, PER: -88dBm @ 250kbps)
- Programmable data rate from 1.2-500kbps.
- Robust solution with excellent selectivity and blocking performance.
- Programmable output power up to 0dBm.
- Ideal for multichannel operation (50-500kHz channels).
- Full packet handling including preamble generation, sync word insertion/detection, address check, flexible packet length, and automatic CRC.
- Programmable carrier sense indicator and digital RSSI output enables adaptive channel selection with increased robustness of the communication link.

Applications:
- Wireless game controllers
- Wireless keyboard/consumer electronics
- Wireless audio
- Sports and leisure equipment

Application Circuit



Block Diagram



RoHS Compliant

CC2500/CC2550 Chips

For quantities of 100 and up or for Tape & Reel, call for quote.

MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each 1	Price Each 25
839-CC2500	CC2500-RTY1	2.4GHz Transceiver Chip (packaged in tray)	3.63	3.15
839-CC2550	CC2550-RTY1	2.4GHz Transmitter Only Chip (packaged in tray)	2.38	1.98

CC2500/2550 Development Tools

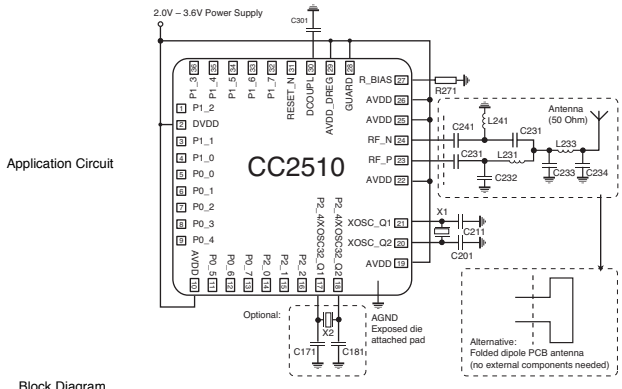
MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each
839-2500/50DK	CC2500/CC2550DK	Full Development Kit - two SmartRF® 04 evaluation boards, two CC2500EM eval. modules, one CC2550EM eval. module, antennas, & cables	510.00
839-2500EMK	CC2500EMK	Evaluation Module Kit - two CC2500EM evaluation modules and two antennas	140.00

CC2510 2.4 GHZ RF SOC TRANSCEIVER WITH ONBOARD 8051 MICROCONTROLLER CHIP

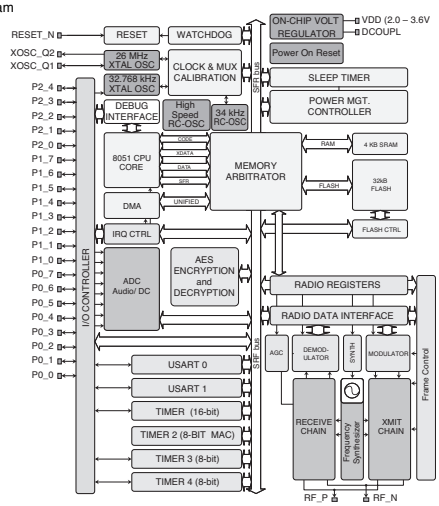
The CC2510 is a powerful 2.4 GHz System-on-Chip designed for low-power and low-voltage wireless communication applications. With a 2.4 GHz radio transceiver, a single-cycle 8051 microcontroller and 32 kB Flash memory, this unique all-in-one device makes it easier than ever to finish your design while offering numerous application possibilities.

Features:
- High-performance and low-power RF transceiver core – same as the industry leading CC2500
- High performance and low power 8051 microcontroller core, typically with 8 times the performance per MHz of a standard 8051
- 32 kB in-system programmable flash
- 4 kB SRAM (with data retention in all power modes)
- Powerful DMA functionality
- Four flexible power modes for reduced power consumption
- System clock source can be 13 MHz on-chip RC oscillator or 26 MHz crystal oscillator. The 26 MHz oscillator is used when radio is active
- Real time clock with low-power 32.768 kHz crystal oscillator or internal low-power 34 kHz RC-oscillator
- Very fast transition times from sleep modes to active enables ultra low average power consumption in low duty-cycle systems
- In deep sleep modes the system can wake up on external interrupts or real time counter events
- High sensitivity
- Excellent receiver selectivity and blocking performance
- Programmable data rate up to 500 kbps
- 2-FSK, GFSK and MSK supported
- Low current consumption (Total: RX: 23 mA, TX: 24 mA, w/ microcontroller running at 26 MHz)
- Digital RSSI / LQI support
- Digital battery monitor
- Ideal for frequency hopping and multichannel operations
- Burst mode data transmission possible
- Very few external component
- 8-14 bits ADC with up to eight inputs
- Wide supply voltage range (2.0V – 3.6V)
- 21 general I/O pins, two with 20 mA sink/source capacity
- Dual data pointers
- In-circuit interactive debugging
- Two USART / SPI interfaces
- Programmable Watchdog timer
- Power On Reset
- On-chip temperature sensor
- 16-bit timer + three 8-bit timers
- True random number generator
- Hardware debug support
- Powerful and flexible development tools and reference designs available
- RoHS compliant 6x6 mm QLP36 package (36 Pin)

Application Circuit



Block Diagram



Applications:
- Wireless keyboard & mouse
- Consumer electronics
- Wireless audio
- Sports and leisure equipment
- Wireless gaming accessories
- Active RF-ID systems
- Remote controls

RoHS Compliant

For quantities of 100 and up or for Tape & Reel, call for quote.

MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each 1	Price Each 25
839-CC2510	CC2510-RTY1	2.4 GHz Transceiver (packaged in tray)	6.49	5.96

CHIPCON Single-Chip RF Transceivers

Chipcon Products from Texas Instruments

CC2420 2.4 GHZ RF TRANSCEIVER CHIP FOR IEEE 802.15.4 AND ZIGBEE™

The CC2420 is a low-cost transceiver designed specifically for low-power, low-voltage RF transceiver applications in the 2.4GHz unlicensed ISM band. It is the first commercially available RF compliant with the IEEE 802.15.4 standard and the first RF-IC that can be qualified for use in 2.4GHz ZigBee™ products. For the CC2420 RF transceiver, Chipcon provides IEEE/802.15.4 MAC software free of charge.

WHAT IS ZIGBEE?

The ZigBee standard has been developed by the ZigBee Alliance, an association of companies working together, to enable reliable, cost-effective, low-power, wirelessly networked monitoring and control products based on an open global standard. The goal of the ZigBee Alliance is to provide the consumer with ultimate flexibility, mobility, and ease of use by building wireless intelligence and capabilities into every day devices. ZigBee technology will be embedded in a wide range of products and applications across consumer, commercial, industrial, and government markets worldwide. For the first time, companies will have a standards-based wireless platform optimized for the unique needs of remote monitoring and control applications, including simplicity, reliability, low-cost, and low-power. The ZigBee communication standard is essential for the growth of wireless home and building automation applications where various end products need to communicate with each other.

WHY ZIGBEE?

Other short-range standards, such as Bluetooth and Wi-Fi, are not designed for low power monitoring and control applications. With ZigBee, however, the case is different. ZigBee is the only standard that specifically addresses the typical requirements for wireless control and monitoring applications, such as:

- Large number of nodes/sensors
- Very low system/node costs
- Operation for years on inexpensive batteries
- Reliable and secure links between network nodes
- Easy deployment and configuration
- Global solutions

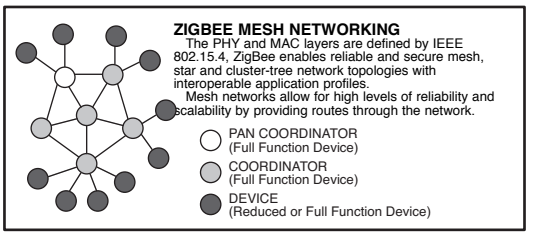
Applications:

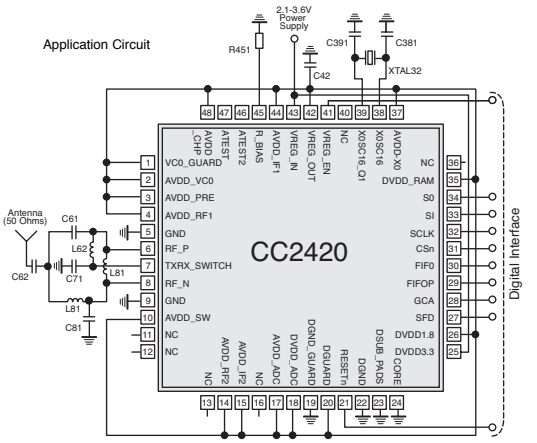
- Home and building automation
- Industrial monitoring and control
- Sensor networks
- Automotive networks
- Intelligent toys
- Consumer electronics

RoHS Compliant

CC2420 Key Features:

- True single-chip 2.4 GHz IEEE 802.15.4/ZigBee(tm) RF transceiver w/MAC support
- Suitable for FFDs (Full Function Devices) & RFDs (Reduced Function Devices) defined by IEEE 802.15.4 & ZigBee(tm)
- DSSS modem w/ 2 Mchips/s & 250kbps effective data rate
- Low current consumption: RX: 19.7mA, TX: 17.4mA
- Low supply voltage with internal voltage regulator: 2.1V -3.6V
- No external RF switch/filter needed
- Programmable output power
- I/Q low-IF receiver
- I/Q direct up-conversion transmitter
- Few external components
- Packet handling with 128 byte (RX) +128 byte (TX) data buffering
- Digital RSSI/LQI support
- Hardware MAC encryption and authentication (AES-128)
- Battery monitor
- QLP-48 package (7x7 mm)
- Complies with EN 300 440, FCC CFR 47 part 15, and ARIB STD-T66
- Powerful, flexible development tools available
- Easy-to-use software for performance evaluation





CC2420 Chip

For quantities of 100 and up or for Tape & Reel, call for quote.

MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each 1	Price Each 25
839-CC2420R	CC2420-RTB1	48P QLP Transceiver (packaged in tubes)	7.20	5.76

CC2420 Development Tools for 802.15.4 and ZigBee™

MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each
839-2420DK	CC2420DK	Full Development Kit - two CC2420 evaluation boards, two CC2420 evaluation modules, 5 sample pieces of CC2420, antennas and adapters	575.00
839-2420DBK	CC2420DBK	Demonstration Board Kit - complement to the development kit and includes two CC2420DB demonstration boards, one CC2420SK sample kit and 2 RS-232 cables	540.00
839-2420EMK	CC2420EMK	Evaluation Module Kit - two CC2420EM evaluation modules and two antennas	140.00
839-2420-ZIGBEE-DK	CC2420 ZIGBEE DK	Full Development Kit - five CC2420 DB and a CC2420 EB that together, with a CC2420EM, can utilize the capability of running Chipcon's packet sniffer with the new ZigBee packet parser addition. Z-Stack object code, tools, and documentation will be provided as an End Customer distribution package, available for download from the Chipcon ZigBee developer site	5000.00
839-2420-ZDK-PRO	CC2420 ZDK PRO	CC-2420ZDK Pro kit-Figure e 8 wireless Zigbee software Development suite, a seat in their 2 day Zigbee training, six months support and a 25% discount on any Zigbee training purchased during these six months. Hardware Included: two SmartRF04EB evaluation boards, two CC2420EM evacuation modules, 5 CC2420DB Demonstration boards, 5 sample pieces of CC2420, antennas and adapters.	9995.00

CC2400 2.4 GHZ RF TRANSCEIVER CHIP

The CC2400 is a true low-cost, low-power single-chip 2.4 GHz ISM band transceiver with extensive hardware features. When cost, size, and world-wide compliance are major design criteria, the CC2400 provides the optimum solution for an effective and reliable two-way wireless digital communication link.

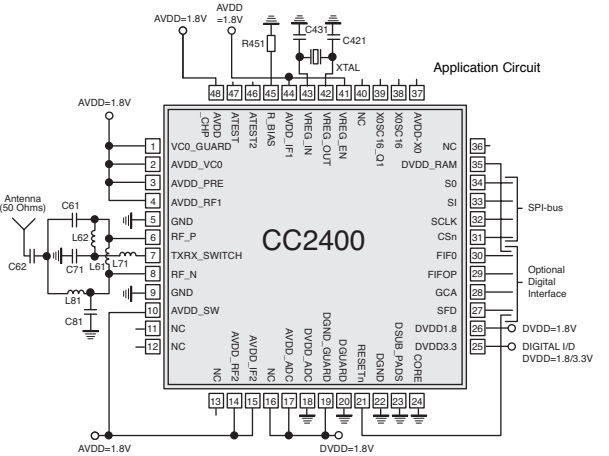
Key Features:

- True single-chip 2400 - 2483.5 MHz RF Transceiver
- GFSK and FSK modulation
- Very low current consumption (RX: 24 mA)
- High sensitivity: -85dBm @ 1Mbps, BER = 10-3
- Programmable over-the-air data rate: 10kbps, 250kbps, or 1Mbps
- Low chip core supply voltage: 1.6-2.0V
- Flexible I/O supply voltage: 1.6-3.6V
- Requires very few external components
- Programmable output power
- Programmable baseband modem
- Digital RSSI carrier sense output
- Agile frequency synthesizer
- Packet handling hardware support
  - Preamble generator with programmable length
  - Programmable synchronization word insertion/detection
  - CRC-16 computation over the data field
  - 8B/10B line coding option
- Data buffering: 32 byte FIFO
- Easy-to-use software for generating the CC2400 configuration data
- Small size (QFN-48 package) 7x7mm
- Complies with EN 300 440, FCC CFR47 part 15, & ARIB STD-T66

Applications :

- Game controllers
- Wireless headsets
- Sports and leisure equipment
- Wireless mouse and keyboards
- Remote controls
- Audio/voice applications
- Joysticks

RoHS Compliant



CC2400 Chip

For quantities of 100 and up or for Tape & Reel, call for quote.

MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each 1	Price Each 25
839-CC2400R	CC2400-RTB1	48P QFN Transceiver (packaged in tubes)	6.86	5.92

CC2400 Development Tools

MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each
839-2400DK	CC2400DK	Full Development Kit - two CC2400 evaluation boards, two CC2400 evaluation modules, 5 sample pieces of CC2400, antennas and adapters	575.00
839-2400DBK	CC2400DBK	Demonstration Board Kit - a complement to the development kit. Includes two CC2400DB demonstration boards, one CC2400SK sample kit & 2 cables	410.00
839-2400EMK	CC2400EMK	Evaluation Module Kit - two CC2400EM evaluation modules and two antennas	140.00

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CHIPCON RF Transceivers for 802.15.4/ZigBee™

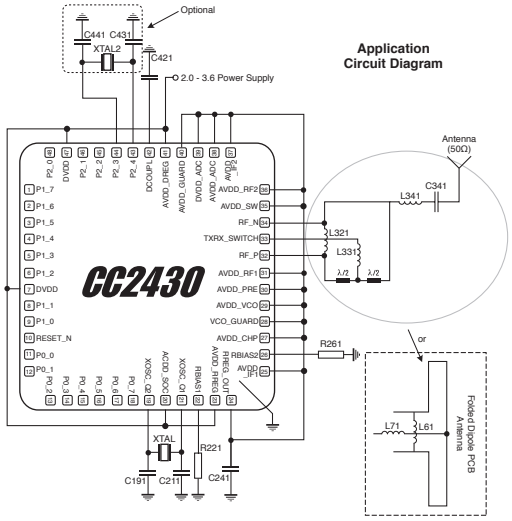
CC2430 2.4 GHZ RF TRANSCEIVER CHIP WITH ONBOARD 8051 MCU FOR IEEE 802.15.4 AND ZIGBEE™

The CC2430 is a true System-on-Chip (SoC) solution for ZigBee™. With the CC2430, ZigBee™ nodes can be built with very low total bill-of-material costs. The CC2430 combines the excellent performance of the leading CC2420 RF-transceiver with an industry-standard enhanced 8051 MCU, 8 kByte of RAM and many other powerful features. The CC2430 comes in 3 different versions: CC2430-F32, CC2430-F64 and CC2430-F128, i.e. 32, 64 or 128 kByte flash. Combined with Chipcon's industry leading ZigBee™ protocol stack (Z-Stack™), the CC2430 is the market's most competitive ZigBee™ solution.

Key Features:
- Power on reset
- Digital RSSI/LQI support
- Digital battery monitor
- On-chip temperature sensor
- Hardware debug support
- Programmable watchdog timer
- 32 MHz single-cycle low power 8051 MCU
- RoHS compliant 7 x 7 mm QLP48 package
- 2.4 GHz IEEE 802.15.4 compliant RF transceiver
- 32, 64, and 128 kByte in-system programmable flash
- Ultra low power: Ideal for battery operated systems
- Four flexible power modes for reduced power consumption
- Industry leading ZigBee(TM) protocol stack (Z-Stack) available
- 8 kByte SRAM, 4 kByte with data retention in all power modes
- One IEEE 802.15.4 MAC timer, one general 16-bit timer and two 8-bit timers
- Reference design with external PA providing +10 dBm output power easily obtainable based on CC2420 with external PA

Applications:
- Home and building automation
- Industrial monitoring and control
- Sensor networks
- Automotive networks
- Intelligent toys
- Consumer electronics

RoHS Compliant



CC2430 Chips

For quantities of 100 and up or Tape and Reel, call for quote.

MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each 1	Price Each 25
839-CC2430-F32	CC2430-F32	48 Pin QLP, 32kB Flash, (packaged in tubes)	7.52	6.58
839-CC2430-F64	CC2430-F64	48 Pin QLP, 64kB Flash, (packaged in tubes)	8.40	7.35
839-CC2430-F128	CC2430-F128	48 Pin QLP, 128 kB Flash, (packaged in tubes)	9.28	8.12

CC2430 Development Tools

MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each
839-2430DK	CC2430DK	CC2430DK Development Kit - two SmartRF04EB Evaluation Boards, two CC2430EM Evaluation Modules, 5 sample pieces of CC2430, antennas and adapters	591.00
839-2430-ZDK-PRO	CC2430 ZDK PRO	CC2430ZDK Pro Kit - Figure 8 Wireless' ZigBee Software Development Suite, a seat in their 2 day ZigBee training, six months support and a 25% discount on any ZigBee training purchased during these six months. Included is also two SmartRF04EB Evaluation Boards, two CC2430EM Evaluation Modules, 5 CC2430DB Demonstration Boards, 5 sample pieces of CC2430, antennas and adapters	9995.00

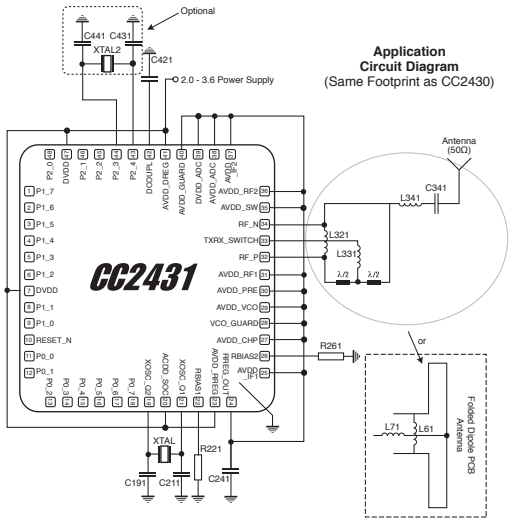
CC2431 2.4 GHZ RF TRANSCEIVER CHIP WITH ONBOARD 8051 MCU FOR IEEE 802.15.4 AND ZIGBEE™

The CC2431 with Location Engine is a true System-on-Chip (SoC) solution for ZigBee™/IEEE 802.15.4 wireless sensor networking. The CC2431 combines the excellent performance of the industry leading CC2420 RF transceiver with an enhanced 8051 MCU, 8 kB of RAM, 128 kB Flash memory and many other powerful features.

Key Features:
- RSSI based Location Engine
- Digital battery monitor
- On-chip temperature sensor
- Hardware debug support
- CSMA/CA coprocessor
- Digital RSSI / LQI support
- Fully pin compatible to CC2430
- Powerful DMA functionality
- AES security coprocessor
- Programmable watchdog timer
- 8-14 bits ADC with up to eight inputs
- Power-On-Reset/Brown-Out Detectionr
- 128 kB in-system programmable Flash
- RoHS compliant 7mm x 7mm QLP48 package
- Enhanced version of the industry standard 8051
- 2.4 GHz IEEE 802.15.4 compliant RF transceive
- 8 kB RAM, 4 kB with data retention in all power modes
- Four flexible power modes for reduced power consumption
- 21 general I/O pins, two with 20 mA sink/source capability
- Two programmable USARTs for master/slave SPI or UART operation
- System clock source can be 16 MHz RC oscillator or 32 MHz crystal oscillator. The 32 MHz oscillator is used when the radio is active
- Optional clock source for ultra-low power operation can be either the low-ower 32 kHz RC oscillator or an optional 32.768 kHz crystal oscillator
- One IEEE 802.15.4 MAC timer, one general 16-bit timer and two 8-bit timers

Applications:
- Asset tracking
- Inventory control
- Container/pallet tracking
- Equipment and personnel tracking
- Security
- Vehicle (load) tracking
- Access and control systems
- Commissioning Networks

RoHS Compliant



CC2431 Chips

For quantities of 100 and up or Tape and Reel, call for quote.

MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each 1	Price Each 25
839-CC2431	CC2431-RTB1	48 Pin QLP, 128 kB Flash, (packaged in tubes)	9.97	9.65

CC2431 Development Tools

MOUSER STOCK NO.	Chipcon/TI Part No.	Description	Price Each
839-2431DK	CC2431DK	CC2431DK - Includes two SmartRF®04EB Evaluation Boards, 10 x CC2431EM Evaluation Modules, 10 x battery boards, antennas and batteries.	995.00
839-2431-ZDK-PRO	CC2431 ZDK PRO	CC2431ZDK Pro Kit - Includes Figure 8 Wireless' ZigBee Software Development Suite, a seat in 2 day ZigBee training, six months support and a 25% discount on any ZigBee training purchased during these six months. The hardware includes the content of the CC2430ZDK and the CC2431DK. The dedicated CC2431 hardware can easily be used for testing the location engine in ZigBee networks. Totally the kit includes 7 x CC2430 boards that can be used for reference nodes in a network and 10 CC2431 boards	10700.00

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DLP DESIGN RFID and ZigBee™ Modules

Products may be RoHS compliant.
Check mouser.com for RoHS status.

DLP-RFID1 RFID READER AND WRITER

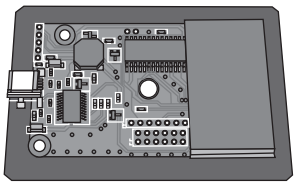
The DLP-RFID1 is a low-cost, USB-powered module for reading from and writing to ISO 15693, ISO 18000-3, and Tag-it™ intelligent RFID transponder tags. It has the ability to both read and write up to 256 bytes of data in addition to reading the unique identifier (UID/SID). All of the DLP-RFID1's electronics and antenna reside within the compact unit, and all operational power is taken from the host PC via the USB interface. The range of the internal antenna is up to 4 inches depending upon the size of the tag being read.

Retail Version

Features:
- ISO 15693, 18000-3, Tag-it™ HF-I Compatible
- Read UID/SID of Up to 15 Tags Simultaneously
- 13.56MHz Reader/Writer
- Built-in Antenna: Up to 4-Inch Read Range
- FCC/IC/CE Modular Approval in Place
- Permanent Unique Serial Number Accessible Via USB
- Integrated Pass/Fail Beeper
- USB Port Powered from Host PC (USB 1.1/2.0 Compatible)
- USB Drivers Provided for Windows XP, XPx64, Server2003, 2000, 98, ME
- Software Development Library Support for Visual C++/Visual Basic

Specifications:
- Reader Frequency: 13.56MHz
- Output Power: 200mW MAX
- Range (Integral Antenna): 4 Inches MAX
- Tags/Protocols Supported: Tag-It*, ISO18000-3, ISO15693
- Communications Interface: USB 1.1/2.0 Compatible, Mini-B 5-Pin Connector
- Operational Power – Active: 120mA
- Operational Power – Idle: 15mA
- Antenna: On-Board Antenna, SMA Position Available**
- USB Driver Support: Windows XP, XPx64, Server2003, 2000, 98, ME
- Physical Dimensions – OEM PCB: .20x2.17x3.12" typ. (5.1x55.1x79.3mm)
- Physical Dimensions – Retail Enclosure: .83x2.3x3.25" typ. (21.1x58.4x82.6mm)
- Operating Temperature: 0-70°C

Applications:
- Real-Time Security
- Personal Identification
- Pharmaceutical Tracking
- Inventory/Asset Management & Tracking
- Library/Book Management & Tracking
- Baggage Tagging
- Sports Event Timing


OEM Version

For quantities of 500 and up, call for quote.

MOUSER STOCK NO.	DLP Part No.	Description	Price Each	
			1	10
626-DLP-RFID1-RG	DLP-RFID1-RG	Includes reader, retractable USB cable and an assortment of tags	119.95	117.00
626-DLP-RFID1-OG	DLP-RFID1-OG	OEM Board Only	94.50	89.50
626-DLP-RFIDTAG	DLP-RFIDTAG	30 Pack of RFID Peel and Stick Tags	29.95	27.50

DLP 802.15.4/ZIGBEE™ READY MODULES

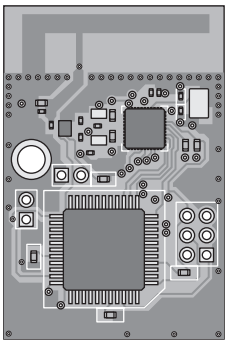
The DLP-RF1 and DLP-RF2 OEM Modules are short-range, low-power, 2.4-GHz, unlicensed worldwide ISM band transceivers designed around the IEEE 802.15.4 Wireless Standard. Both support point-to-point and star network configuration using preprogrammed firmware.

The RF1 and RF2 are ready for either direct design into finished product or as a quick wire replacement within a home or office application. The units come preprogrammed with DLP Design's Serial Interface Packet Processor (SIPP™) firmware based upon Freescale's SMAC RF IC control firmware. If the SIPP™ firmware does not meet the requirements of the project at hand, then the BDM interface is available for reprogramming the microcontroller with user firmware.

Application Areas:
- Remote control and wire replacement in industrial systems
- Wireless sensor networks
- Home automation and control
- Factory automation
- Heating and cooling systems
- Inventory management and RFID tagging
- Human interface devices
- Remote entertainment control
- Wireless toys

Features:
- IEEE 802.15.4 Compliant & ZigBee ready
- Freescale MC13192 RF Transceiver IC
- Freescale MC9S08GT60 Microcontroller
- Carrier-sense, multiple-access technology
- Range: >700 feet, outdoor line of sight
- Royalty-free USB drivers
- USB interface programming as easy as RS232C
- Agency approvals in place for immediate deployment in the US, Canada, and Europe
- 16 Channels (2.405GHz to 2.480GHz)
- Microcontroller pre-programmed with SIPP firmware
- <35 microamp low-power mode
- Antenna Integral to PCB Design–No External Antenna to Purchase and Mount SIPP™ firmware

DLP-RF2 (TTL Serial Interface)



DLP-RF2 - 2.4 GHZ OEM RF Transceiver Module

The DLP-RF2 combines a Freescale™ MC13192 2.4GHz Direct-Sequence, Spread-Spectrum RF Transceiver IC and Freescale MC9S08GT60 microcontroller to form an IEEE 802.15.4 compliant, ZigBee™ ready, short-range transceiver module. The DLP-RF2 connects to user electronics via a standard, 20-pin male header.

The MC9S08GT60 microcontroller is preprogrammed with DLP Design's Serial Interface Packet Processor (SIPP™ firmware) for accessing the transceiver functions via simple serial calls. Interface to an external serial host microcontroller/DSP/FPGA, etc. is accomplished via a simple 2-wire (RX, TX, and ground) interface.

The SIPP firmware in the DLP-RF2 resides at the application layer and is based on Freescale's SMAC. The SIPP firmware provides basic access to DLP-RF2 functionality: Packet receive and transmit, transceiver settings, EEPROM access, etc. The DLP-RF2 can also operate without a serial host controller. Basic digital I/O, A/D conversions, temperature measurement, and latching/non-latching relay control are available via the SIPP firmware. The MC9S08GT60 can be reprogrammed (if desired) with user-supplied firmware via a 6-pin BDM header that is compatible with the P&E USB-ML-12 and device programmers (purchased separately).

DLP-RF2

For quantities of 500 and up, call for quote.

MOUSER STOCK NO.	DLP Part No.	Price Each			
		1	10	100	250
626-DLP-RF2-Z	DLP-RF2-Z	35.00	30.00	27.00	25.00

DLP-RF1 - 2.4 GHZ OEM RF USB Transceiver Module With USB Interface

The DLP-RF1 combines a USB interface, Freescale™ MC13192 2.4GHz Direct-Sequence Spread Spectrum RF Transceiver IC and Freescale MC9S08GT60 microcontroller to form an IEEE 802.15.4 compliant, ZigBee™ ready, short-range transceiver module.

The MC9S08GT60 microcontroller is preprogrammed with DLP Design's Serial Interface Packet Processor (SIPP™ firmware) for accessing the transceiver functions via simple serial calls. The application programming required for accessing the module via USB is functionally identical to that used to access the RS232C ports on a standard Windows/Linux/Mac PC via the use of royalty-free Virtual COM Port (VCP) drivers. (No USB driver development is required for most applications.) The SIPP firmware in the DLP-RF1 resides at the application layer and is based on Freescale's SMAC. The SIPP firmware provides basic access to DLP-RF1 functionality: packet receive and transmit, transceiver settings, EEPROM access, etc.

DLP-RF2 Development Tools

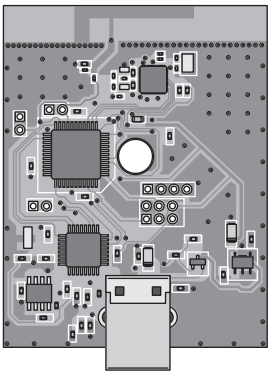
A 20-pin interface header is provided for each of these development tools to allow quick connection to the DLP-RF2 transceiver.

The **DLP-RF2-SENS** provides example designs for a temperature/humidity sensor, door switch input, and a system for measuring battery power. This developer's tool demonstrates the low-power mode of operation in which the module remains in Sleep Mode drawing less than 40 microamps of current from two AAA batteries until either the door switch input detects a change or the timer wakes up the transceiver to check in with the system controller.

The **DLP-RF2-RELAY** also demonstrates the low-power mode of operation while providing a battery power measurement system and door switch input together with two latching relays. While in Sleep Mode, the total system current drawn from two AA batteries is less than 40 microamps regardless of the state of the relays.

The **DLP-RF2-PROTO** is intended to enable the designer to quickly progress in the development of hardware and software associated with wireless networking projects. This board offers a number of flexible tools to accommodate numerous modes of operation:

DLP-RF1 (Host Interface)



DLP-RF2 Proto Board Features:
- BDM Programming Interface
- Easy-to-Use USB Interface for Modeling Serial Host Firmware on a PC
- RS232C (DB9) Interface for Connection to a Legacy Peripheral
- Buffered LED Indication of 8 Selected Digital I/O Lines
- Low-Power Mode Jumper
- Prototyping Breadboard
- Three Power Sources: USB Port, DC Jack (4-15VDC), or 9-Volt Battery Clips
- A/D and Voltage Reference Setups

DLP-RF1 And Development Tools

For quantities of 500 and up, call for quote.

MOUSER STOCK NO.	DLP Part No.	Description	Price Each		
			1	50	100
626-DLP-RF1-Z	DLP-RF1-Z	DLP-RF1-Z USB Transceiver Module for Computer Control Functions	59.95	53.10	49.95
626-DLP-RF2-SENS	DLP-RF2-SENS	Temperature and Humidity Sensor Board for RF2 Module	59.95	58.00	56.26
626-DLP-RF2-RELAY	DLP-RF2-RELAY	Latching Relay Board for RF2 Module	49.95	48.20	46.75
626-DLP-RF2-PROTO	DLP-RF2-PROTO	Proto Development Board for RF2 Module Applications	99.95	95.50	90.70

FLEXIPANEL Zigbee and Bluetooth Modules

FlexiPanel

RoHS Compliant **This page of product is compliant.**

FlexiPanel designs and manufactures value-added RF modules and specializes in off-the-shelf solutions for OEMs, which include all RF circuitry, including antennas, and FCC/CE certifications. The aim is to make RF integration easy. FlexiPanel is also a leading provider of Bluetooth and ZigBee/IEEE 802.15.4 modules. The company regularly patents key aspects of its designs and is continually reinvesting in order to diversify its offering of modular electronics products.

2.4 GHZ RF MODULES AND ADAPTERS

EasyBee is an IEEE 802.15.4 compliant RF transceiver. It enables designers to easily add ZigBee / IEEE 802.15.4 wireless capability to their products without the need for RF or antenna design expertise.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	FlexiPanel Part No.	Fig.	Description	RoHS & Pb Free	Price Each 1	Price Each 10
132-EASYBEE	EASYBEE	A	2.4GHz Transceiver Module DIL package	Yes	38.00	35.63
132-EASYBEE_SO	EASYBEE_SO	B	2.4GHz Transceiver Module SO package	Yes	24.19	22.68
132-UZBEE	UZBEE	C	2.4GHz Zigbee USB Adapter	Yes	60.77	56.97
132-EASYBEE-EVAL	EASYBEE-EVAL	-	EasyBee Evaluation Board - IEEE 802.15.4	Yes	36.48	34.20

PIXIE ZIGBEE FFD MODULES

Pixie provides a complete ZigBee solution for OEMs, integrating IEEE 802.15.4 2.4GHz PHY / MAC layers with Microchip Technology's NWK / APL / ZDO layers. It provides a path for extremely rapid migration from Microchip's PICDEM Z ZigBee development environment to market-ready product.

Pixie is capable of full function device (FFD) operation and is suitable for router and coordinator nodes. The lower cost Pixie Lite version is used for reduced function devices, e.g. endpoints, with 2 fewer I/O lines.

Dual In Line Package

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	FlexiPanel Part No.	Fig.	Description	RoHS & Pb Free	Price Each 1	Price Each 10
132-PIXIE-PXSC	PIXIE-PXSC	D	Switcher Coordinator firmware	Yes	62.29	58.40
132-PIXIE-PXSR	PIXIE-PXSR	D	Switcher Router firmware	Yes	62.29	58.40
132-PIXIE-LITE-PLFE	PIXIE-LITE-PLFE	D	Switcher Fast End Device firmware	Yes	60.77	56.97
132-PIXIE-LITE-PLSE	PIXIE-LITE-PLSE	D	Switcher Sleepy End Device firmware	Yes	60.77	56.97
132-PIXIE-EVAL	PIXIE-EVAL	D	Pixie Evaluation Kit - ZigBee	Yes	456.00	427.50

Surface Mount Package

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	FlexiPanel Part No.	Fig.	Description	RoHS & Pb Free	Price Each 1	Price Each 10
132-PIXIE-SO-PXSC	PIXIE-SO-PXSC	E	Switcher Coordinator firmware	Yes	47.42	44.46
132-PIXIE-SO-PXSR	PIXIE-SO-PXSR	E	Switcher Router firmware	Yes	47.42	44.46
132-PIXIE-LT-SO-PLFE	PIXIE-LT-SO-PLFE	E	Switcher Fast End Device firmware	Yes	43.65	40.92
132-PIXIE-LT-SO-PLSE	PIXIE-LT-SO-PLSE	E	Switcher Sleepy End Device firmware	Yes	43.65	40.92
132-PIXIE-EVAL	PIXIE-EVAL	E	Pixie Evaluation Kit - ZigBee	Yes	456.00	427.50

BLUETOOTH 2.0 TRANSCEIVERS

LinkMatik 2.0 is a serial / PCM audio to Bluetooth data link. It can be controlled from a host controller using simple commands. LinkMatik 2.0 can also operate without a host controller for point-to-point serial connections. Auto-Slave and Auto-Master modes allow LinkMatik 2.0 to operate a slave, master or wedded pair. LinkMatik is shipped in Auto-Slave mode.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	FlexiPanel Part No.	Fig.	Description	RoHS & Pb Free	Price Each 1	Price Each 10
132-LINKMATIK-2-DIL	LINKMATIK 2 DIL	F	Dual In Line package, 3.3V - 5V	Yes	97.28	91.20
132-LINKMATIK-2-SO	LINKMATIK 2 SO	G	Surface Mount package, 3.3V	Yes	60.77	56.97

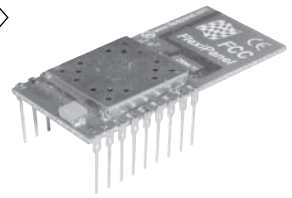
TOOTHPICK 2.0, PIC WITH BLUETOOTH

Toothpick is a PIC microcontroller and LinkMatik radio combination, preloaded with Toothpick Services firmware providing FlexiPanel user interface server, wireless field programming and Toothpick Slave for optional external host control.

For quantities greater than listed, call for quote.

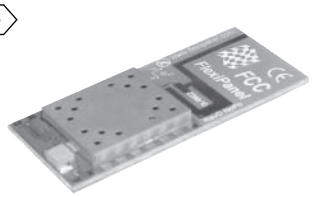
MOUSER STOCK NO.	FlexiPanel Part No.	Fig.	Description	RoHS & Pb Free	Price Each 1	Price Each 10
132-TOOTHPICK-2-DIL	TOOTHPICK 2 DIL	H	Toothpick 2.0, 28-pin DIL package, 3.3V - 5V	Yes	145.92	136.80
132-TOOTHPICK-2-SO	TOOTHPICK 2 SO	H	Toothpick 2.0, SO package, 3.3V - 5V	Yes	118.56	111.15
132-TOOTHPICK-2L-SO	TOOTHPICK 2L SO	H	Toothpick 2.0 Lite, SO package, 3.3V	Yes	91.20	85.50
132-EVAL-BT	EVAL-BT	-	Bluetooth Evaluation Board	Yes	150.78	141.36

A



Transceiver Module (DIL)

B

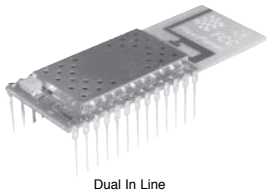


Transceiver Module (SO)

C

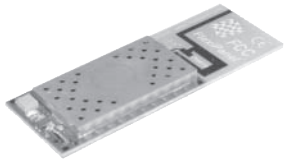
USB Adapter

D



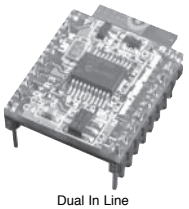
Dual In Line

E



Surface Mount

F

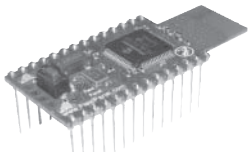


Dual In Line

G

Surface Mount

H



Dual In Line Shown

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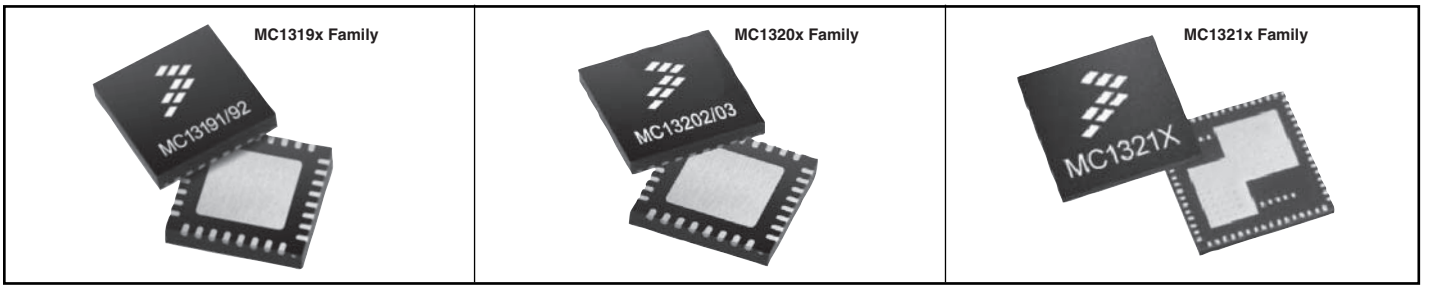
FREESCALE ZigBee™ Wireless Solutions and Kits

Products may be RoHS compliant.
Check mouser.com for RoHS status.

freescale™ semiconductor



FREESCALE ZIGBEE WIRELESS SOLUTIONS

Freescale Semiconductor offers an extensive set of low cost wireless networking solutions, hardware and software, to provide you "A fast start to wireless networking". Consider using Freescale Semiconductor's Transceiver or System-in-Package (SiP) solutions for the following applications. Application spaces include, but are not limited to:

- **Residential and Commercial Automation**
- **Industrial Control Applications**
- **Healthcare Products**
- **Consumer Products**

MC1319x Family of Generation I Transceivers

RoHS Compliant

The Generation I MC1319x and Generation II MC1320x families of transceivers may be utilized with Freescale's 8-bit or 32-bit MCU's. The transceivers in combination with the MCU and the selected MAC software provide a flexible set of wireless solutions to fit the customer's applications requirements in a cost-effective manner.

For quantities 250 and up, call for quote.

MOUSER STOCK NO.	Freescale Part No.	Channels	Package	Supply Voltage (V)	Frequency Band (GHz)	Serial Interface	Application	Communication Protocol	Price Each		
									1	25	100
841-MC13191FC	MC13191FC	16	1311 (QFN 32)	2 to 3.4V	2.4GHz	SPI	2.4 GHz ISM	SIMPLE MAC	3.10	2.87	2.56
841-MC13192FC	MC13192FC	16	1312 (QFN 32)	2 to 3.4V	2.4GHz	SPI	2.4 GHz ISM, 802.15.4	IEEE 802.15.4	3.66	3.39	3.02
841-MC13193FC	MC13193FC	16	1313 (QFN 32)	2 to 3.4V	2.4GHz	SPI	2.4 GHz ISM, ZIGBEE	ZIGBEE	4.42	4.08	3.65

MC1320x Family of Generation II Transceivers

RoHS Compliant

The MC1320x family is a series of short range, low power, 2.4 GHz ISM band second generation transceivers. The MC1320x family contains a complete packet data modem compliant with the IEEE® 802.15.4 standard PHY (Physical) layer. The solutions also offer an integrated TX/RX switch for fewer components and lower cost BOM. When combined with an appropriate MCU, the MC1320x family provides a cost-effective solution for short-range data links and networks.

For quantities 250 and up, call for quote.

MOUSER STOCK NO.	Freescale Part No.	Channels	Package	Supply Voltage (V)	Frequency Band (GHz)	Serial Interface	Application	Communication Protocol	Price Each		
									1	25	100
841-MC13201FC	MC13201FC	16	1311 (QFN 32)	2 to 3.4V	2.4GHz	SPI	2.4 GHz ISM	SIMPLE MAC	3.35	3.10	2.76
841-MC13202FC	MC13202FC	16	1311 (QFN 32)	2 to 3.4V	2.4GHz	SPI	2.4 GHz ISM, 802.15.4	IEEE 802.15.4	3.91	3.62	3.23
841-MC13203FC	MC13203FC	16	1311 (QFN 32)	3 to 3.4V	2.4GHz	SPI	2.4 GHz ISM, ZIGBEE	ZIGBEE	4.59	4.25	3.79

MC1321x Family of System in a Package (SiP)

RoHS Compliant

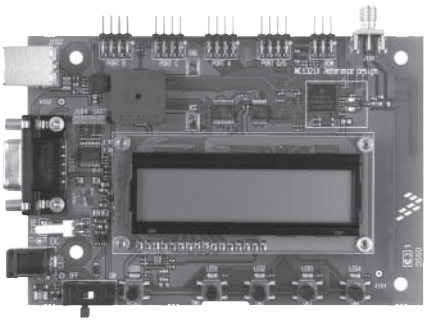
The MC1321x family is Freescale Semiconductor's ZigBee platform technology with a low power 2.4 GHz RF transceiver and an 8-bit MCU in a 71-pin LGA package. The MC1321x family also offers broad range of integrated peripherals and interfaces including I2C, SCI, Timers/PWM, KBI, as well as an 8 channel 10-bit ADC. The combination of the radio and microcontrollers, as well as the incorporation of key peripherals and functions, in a small footprint package allows for a cost-effective solution.

For quantities 250 and up, call for quote.

MOUSER STOCK NO.	Freescale Part No.	Channels	Package	Supply Voltage (V)	Frequency Band (GHz)	MCU Memory	Application	Communication Protocol	Price Each		
									1	25	100
841-MC13211	MC13211	16	LGA , 71-pin	2 to 3.4V	2.4GHz	16KB	2.4 GHz ISM	SIMPLE MAC	7.33	6.79	6.05
841-MC13212	MC13212	16	LGA , 71-pin	2 to 3.4V	2.4GHz	32KB	2.4 GHz ISM, 802.15.4	IEEE 802.15.4	8.02	7.42	6.62
841-MC13213	MC13213	16	LGA , 71-pin	2 to 3.4V	2.4GHz	60KB	2.4 GHz ISM, ZIGBEE	IEEE 802.15.4 or BeeStack	6.17	5.70	5.09

FREESCALE ZIGBEE DEVELOPMENT KITS

Freescale Semiconductor provides a range of comprehensive yet cost-effective development tools designed to provide developers with the necessary hardware and software required to evaluate and develop wireless solutions ranging from simple point-to-point networks to ZigBee mesh networks.



BeeKitTM Wireless Connectivity Toolkit

Freescale's BeeKit development environment for Windows operating systems provides a GUI in which users can create, modify, save and update wireless network solutions based on Freescale's Simple MAC (SMAC), IEEE 802.15.4 PHY/MAC and BeeStack ZigBee protocol stack. BeeKit provides a wizard and solution explorer that allows the user to quickly and easily configure parameters before creating the project, greatly reducing the need to sift through individual files and manually configure parameters. With the comprehensive code base of wireless networking libraries, application templates, and sample applications, the user generates the appropriate workspace files to be imported into an integrated development environment (IDE) for continued development and debugging.
Download your complimentary BeeKit at www.Freescale.com/Zigee

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Freescale Part No.	Description	Price Each
841-13192DSKE	13192DSK-A0E	1319x Developer's Starter Kit	228.15
841-13192EVBE	13192EVB-A0E	1319x Evaluation Board	457.65
841-13192DSK-BDME	13192DSK-BDM-A0E	1319x Developer's Starter Kit with BDM	342.90
841-13192EVB-BDME	13192EVB-BDM-A0E	1319x Evaluation Board with BDM	515.70
841-1321XDSK	1321XDSK	1321x Developer's Starter Kit	269.03
841-1321XDSK-BDM	1321XDSK-BDM	1321x Developer's Starter Kit with BDM	377.40
841-1321XNSK	1321XNSK	1321x Network Starter Kit	540.73
841-1321XNSK-BDM	1321XNSK-BDM	1321x Network Starter Kit with BDM	620.58
841-1321XEVK	1321XEVK	1321x Evaluation Kit	1895.93

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MAXSTREAM Embedded Wireless Products

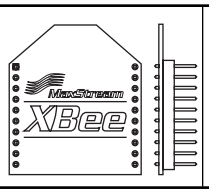
Products may be RoHS compliant.
Check mouser.com for RoHS status.

Easy-to-Use! No configuration is necessary for out-of-box RF operation. Simply feed data into one module, then the data is sent out the other end of the wireless link. If more advanced functionality is needed, the modules support an extensive set of AT commands.

MaxStream 900 MHz solutions are certified for use in North American, but integrators in Europe must use MaxStream's 2.4 GHz solutions.

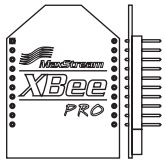
XBee Specifications:
- Indoor/Urban Range: Up to 100' (30m)
- Outdoor Line-of-Sight Range: Up to 300' (100m)
- Transmit Power Output: 1mW (0dBm)
- Power-Down Current: <10µA
- Operating Frequency: 2.4GHz
- RF Data Rate: 250,000bps

RoHS Compliant



XBee-Pro Specifications:
- Indoor/Urban Range: Up to 300' (100m)
- Outdoor Line-of-Sight Range: Up to 1 mile (1.6km)
- Transmit Power Output: 100mW (20dBm) EIRP
- Power-Down Current: <10µA
- Operating Frequency: 2.4GHz
- RF Data Rate: 250,000bps

RoHS Compliant



900MHZ

Development Kits

MOUSER STOCK NO.	Maxstream Part No.	Frequency	OTA Data Rate	Antenna	Connector	Temperature	Price Each
888-X09-009-DK	X09-009-DK	900 MHz - XStream	9600	RPSMA	RPSMA	0°C to +70°C	409.00
888-X09-019-DK	X09-019-DK	900 MHz - XStream	19200	RPSMA	RPSMA	0°C to +70°C	409.00
888-XT09-DK	XT09-DK	900Mhz - XTend	software setable	RPSMA/MMCX	RPSMA & MMCX	0°C to +70°C	499.00
888-XC09-009-DK	XC09-009-DK	900Mhz - XCite	9600	RPSMA	RPSMA	0°C to +70°C	149.00
888-XC09-038-DK	XC09-038-DK	900Mhz - XCite	38400	RPSMA	RPSMA	0°C to +70°C	149.00

OEM Modules

MOUSER STOCK NO.	Maxstream Part No.	Frequency	OTA Data Rate	Antenna	Connector	Temperature	Price Each
888-X09-009NSC	X09-009NSC	900 MHz - XStream	9600	No	RPSMA	0°C to +70°C	153.00
888-X09-019NSC	X09-019NSC	900 MHz - XStream	19200	No	RPSMA	0°C to +70°C	153.00
888-X09-009NMC	X09-009NMC	900 MHz - XStream	9600	No	MMCX	0°C to +70°C	123.76
888-X09-019NMC	X09-019NMC	900 MHz - XStream	19200	No	MMCX	0°C to +70°C	123.76
888-X09-009WNC	X09-009WNC	900 MHz - XStream	9600	Yes	3" Wire	0°C to +70°C	121.99
888-X09-019WNC	X09-019WNC	900 MHz - XStream	19200	Yes	3" Wire	0°C to +70°C	121.99
888-XT09-SI	XT09-SI	900MHz - XTend	Software Setable	No	RPSMA	0°C to +70°C	201.38
888-XT09-MI	XT09-MI	900MHz - XTend	Software Setable	No	MMCX	0°C to +70°C	201.38

PKG Product

MOUSER STOCK NO.	Maxstream Part No.	Frequency	OTA Data Rate	Interface	Accessories	Temperature	Price Each
888-X09-009PKC-RA	X09-009PKC-RA	900 MHz - XStream	9600	RS-232	Yes	0°C to +70°C	250.00
888-X09-019PKC-RA	X09-019PKC-RA	900 MHz - XStream	19200	RS-232	Yes	0°C to +70°C	250.00
888-X09-009PKC-UA	X09-009PKC-UA	900 MHz - XStream	9600	USB	Yes	0°C to +70°C	250.00
888-X09-019PKC-UA	X09-019PKC-UA	900 MHz - XStream	19200	USB	Yes	0°C to +70°C	250.00
888-XT09-PKI-RA	XT09-PKI-RA	900MHz - XTend	Software Setable	RS-232	Yes	-40°C to +85°C	299.00
888-XT09-PKI-RA	XT09-PKI-RA	900MHz - XTend	Software Setable	USB	Yes	-40°C to +85°C	299.00

Antennas

MOUSER STOCK NO.	Maxstream Part No.	Connector Type	Gain	Length	Material	Price Each
888-A09-HASM-675	A09-HASM-675	RPSMA male	2.1dBi	6"	Rubber	20.00
888-A09-HBMM-P5I	A09-HBMM-P5I	MMCX w/5" pigtail cable	2.1dBi	7"	Rubber	21.00

2.4GHZ

Development Kits

MOUSER STOCK NO.	Maxstream Part No.	Frequency	OTA Data Rate	Antenna	Connector	Temperature	Price Each
888-X09-009NSC	X24-019-DK	2.4 GHz - XStream	19200	RPSMA	RPSMA	0°C to +70°C	409.00
888-X09-019NSC	X24-009-DK	2.4 GHz - XStream	9600	RPSMA	RPSMA	0°C to +70°C	409.00
888-X09-009NMC	XB24-PDK	2.4GHz - XBee	256000	u.fl/chip/wire	u.fl	-40°C to +85°C	329.00
888-X09-019NMC	XB24-DKS	2.4GHz - XBee	256000	u.fl/chip/wire	u.fl	-40°C to +85°C	129.00
888-X09-009WNC	XBP24-DKS	2.4GHz - XBee	256000	u.fl/chip/wire	u.fl	-40°C to +85°C	179.00

OEM Modules

MOUSER STOCK NO.	Maxstream Part No.	Frequency	OTA Data Rate	Antenna	Connector	Temperature	Price Each
888-X24-009NSC	X24-009NSC	2.4 GHz - XStream	9600	No	RPSMA	0°C to +70°C	98.19
888-X24-019NSC	X24-019NSC	2.4 GHz - XStream	19200	No	RPSMA	0°C to +70°C	98.19
888-X24-009NMC	X24-009NMC	2.4 GHz - XStream	9600	No	MMCX	0°C to +70°C	96.20
888-X24-019NMC	X24-019NMC	2.4 GHz - XStream	19200	No	MMCX	0°C to +70°C	96.20
888-X24-009WNC	X24-009WNC	2.4 GHz - XStream	9600	Yes	3" Wire	0°C to +70°C	94.22
888-X24-019WNC	X24-019WNC	2.4 GHz - XStream	19200	Yes	3" Wire	0°C to +70°C	94.22
888-XB24-ACI-001	XB24-ACI-001	2.4Ghz XBee	256000	Yes	chip	-40°C to +85°C	22.50
888-XB24-AWI-001	XB24-AWI-001	2.4Ghz XBee	256000	Yes	wire	-40°C to +85°C	22.50
888-XB24-AUI-001	XB24-AUI-001	2.4Ghz XBee	256000	No	u.fl	-40°C to +85°C	22.50
888-XBP24-ACI-001	XBP24-ACI-001	2.4Ghz XBee-PRO	256000	Yes	chip	-40°C to +85°C	32.00
888-XBP24-AWI-001	XBP24-AWI-001	2.4Ghz XBee-PRO	256000	Yes	wire	-40°C to +85°C	32.00
888-XBP24-AUI-001	XBP24-AUI-001	2.4Ghz XBee-PRO	256000	No	u.fl	-40°C to +85°C	32.00

PKG Product

MOUSER STOCK NO.	Maxstream Part No.	Frequency	OTA Data Rate	Interface	Accessories	Temperature	Price Each
888-X24-009PKC-RA	X24-009PKC-RA	2.4 GHz - XStream	9600	RS-232	Yes	0°C to +70°C	198.00
888-X24-019PKC-RA	X24-019PKC-RA	2.4 GHz - XStream	19200	RS-232	Yes	0°C to +70°C	198.00
888-X24-009PKC-UA	X24-009PKC-UA	2.4 GHz - XStream	9600	USB	Yes	0°C to +70°C	198.00
888-X24-019PKC-UA	X24-019PKC-UA	2.4 GHz - XStream	19200	USB	Yes	0°C to +70°C	198.00
888-XBP24-PKI-001-RA	XBP24-PKI-001-RA	2.4Ghz XBee	256000	RS-232	Yes	-40°C to +85°C	109.00
888-XBP24-PKC-001-UA	XBP24-PKC-001-UA	2.4Ghz XBee	256000	USB	Yes	-40°C to +85°C	119.50

Antennas

MOUSER STOCK NO.	Maxstream Part No.	Connector Type	Gain	Length	Material	Price Each
888-A24-HASM-525	A24-HASM-525	RPSMA male	2.1dBi	6"	Rubber	20.00
888-A24-HABMM-P5I	A24-HABMM-P5I	MMCX w/5" pigtail cable	2.1dBi	7"	Rubber	21.00
888-A24-HASM-450	A24-HASM-450	RPSMA male	2.1dBi	4.5"	Rubber	9.50
888-A24-HABUF-P51	A24-HABUF-P5I	U.FL	2.1dBi	5"	Rubber	9.50
888-JF1R6-CR3-4I	JF1R6-CR3-4I	U.FL female to RPSMA female cable	n/a	4"	RG178 cable	7.50

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PHOENIX CONTACT Wireless I/O Systems

900MHZ ONE-WAY WIRELESS SYSTEMS

With these unidirectional radio systems it is possible to record and safely transmit an analog and two digital sensor signals. With very simple installation, it is possible to collect signals where cables cannot be laid or can only be laid with great difficulty. In addition to point to point connections, the possibilities also exists of constructing multi-receiver systems. The sets include a receiver, transmitter, and antennas with connecting cable.

Features:
- 1 watt transmit power
- Interference free - Frequency Hopping Spread Sprectrum technology
- Licence free 902 - 928MHz Industrial, Scientific, and Medical (ISM) band
- Class I, Division 2 approved for hazardous area installation (UL, CUL and CSA approved)
- Temperature Range: -40°C to +70°C
- Easy to use, wire in - wire out, no setup or programming
- Range: 600 - 1000 ft in plant, no line of sight

MOUSER STOCK NO.	Phoenix Type	Fig.	Description	Price Each
651-2867102	RAD-ISM-900-SET-UD-ANT	A	24V DC set with one 4-20mA and 2 discrete signals. DIN rail mount	1397.00
651-2867021	RAD-ISM-900-SET-AC-UD	B	110-240V AC set with one 4-20mA and 2 discrete signals. Weatherproof NEMA 4X conduit mount transmitter , DIN rail mount receiver.	1477.00
651-2867034	RAD-ISM-900-SET-DC-UD	B	12-30V DC set for one 4-20mA and 2 discrete signals. Weatherproof NEMA 4X conduit mount transmitter , DIN rail mount receiver.	1397.00
651-2867047	RAD-ISM-900-RX	-	Spare Receiver to expand point to multipoint connections. DIN Rail mount	696.00

900MHZ TWO-WAY WIRELESS SYSTEMS WITH EXPANDABLE I/O OPTIONS

Besides duplex operation, the bi-directional radio system offers the possibility of lining up additional moudules for recording and outputting analog and digital signals. This unique design gives the user flexibility to add on multiple channels of I/O to the pared transceiveres in combinations. They are ideal for moving numerous signals within high interference enviornments without costly cable and conduit runs. The sets include a receiver, transmitter, and antennas with connecting cable.

Features:
- 1 watt transmit power
- Interference free - Frequency Hopping Spread Sprectrum technology
- Licence free 902 - 928MHz Industrial, Scientific, and Medical (ISM) band
- Range: 600 - 1000 ft in plant, no line of sight
- Class I, Division 2 approved for hazardous area installation (UL, CUL and CSA approved)
- Up to 8 expandable I/O modules per transceiver on common power
- Max 33 analog or 66 discrete signals in one direction
- Dry contact LINK diagnostic output
- Temperature Range: -40°C to +70°C

MOUSER STOCK NO.	Phoenix Type	Fig.	Description	Price Each
651-2867270	RAD-ISM-900-SET-BD-BUS-ANT	A	9-30V DC set with one 4-20mA in/out and 2 discrete signals in/out with bus connection for power and communicatrion. DIN Rail mount.	2637.00
651-2867092	RAD-ISM-900-BD-BUS	–	Device can be configured as a spare or as a repeater for long distance or heavily obstructed applications (requires HOPKEY for configuration)	1266.00
I/O Modules				
651-2867115	RAD-IN-4A-I	C	4 channel analog input module, 4mA - 20mA	369.00
651-2867128	RAD-OUT-4A-I	C	4 channel analog output module, 4mA - 20mA	411.00
651-2867144	RAD-IN-8D	C	8 channel digitial input module, 5-36V AC/DC	300.00
651-2867157	RAD-OUT-8D-REL	C	8 channel digital output module with relay, 120V AC, 5A rated contacts	358.00

2.4 GHZ POINT TO MULTIPOINT BLUETOOTH WIRELESS DATA PSI BLUETOOTH CONVERTER

The PSI Bluetooth converter provides a quick and easy wireless connection between serial interfaces of RS-232, RS-422, and RS-485 2-wire standard. Data connections can be established to third party devices or the PSI Bluetooth RS-232 adapter. This module has been specifically designed to meet the requirements of industrial enviornments and supports operation without software drivers thanks to its full integrated protocol stacks.

Features:
- Din Rail Mount
- Supply of 24V DA or AC
- Transmission speeds of up to 187.5 kbps
- Integrated Bluetooth path diagnostics
- Class I, Division 2 approved for hazardous area installation (UL, CUL and CSA approved)
- Can be set to V.24(RS-232), RS-422, or RS-485
- Supports all popular 10/11-bit UART data formats
- Bluetooth access protected by password, fixed device pairing or device access list
- Scalable transmission power (-28dBm - +20 dBm)

MOUSER STOCK NO.	Phoenix Type	Fig.	Description	Price Each
651-2708517	PSI-WL-RS232-RS485/BT	D	Bluetooth converter for wireless RS 232, RS 422, & RS 485, MCX connection for external antenna	388.00

PSI BLUETOOTH RS-232 ADAPTER

The PSI Bluetooth V.24 (RS-232) adapter provides an easy wireless connection between devices with V.24(RS-232) interface or from devices with V.24(RS-232) interface to Bluetooth devices. Data connections can be established to the PSI Bluetooth Conveter or other third party devices. The adapter is connected directly to an operator interface or laptop and is immediately ready for operation. The user can switch over easily from one control system to another without installing any drivers.

Features:
- Direct connect to the interface
- Operation without software drivers
- Fully integrated protocol stacks
- Industrial supply with 5V DC
- Transmission speeds of up to 115.2 kbps
- Supports all popular 10/11-bit UART data formats
- Bluetooth access protected by password, fixed device pairing or device access list
- Multipoint-compatible with up to 3 servers

MOUSER STOCK NO.	Phoenix Type	Fig.	Description	Price Each
651-2708494	PSI-WL-PLUG-RS232/BT	E	232 Bluetooth adapter for direct mounting on 9-pos serial port, internal antenna, power supplied via USB/PS2 power adapter cable	183.00
651-2708025	PSM-VLTG-USB/PS2/0,5	-	USB/PS2 power adapter cable for Bluetooth RS-232 adapter, supplies approx. 5Vdc using the USB or PS2 port of a computer.	20.00

FL COM SERVER - SERIAL RS-232 DEVICE SERVER FOR 10/100BASE-T(X)

The FL COM SERVER converts a serial RS-232 interface to Ethernet. It allows easy integration of RS-232 devices into 10/100Base-T(X) networks.

Features:
- Supports all common Network Protocols
- Diagnostic display
- Integrated surge voltage protection
- 10/100 Base T(X) Auto Detect
- Din Rail Mount
- 22.5 Housing width

MOUSER STOCK NO.	Phoenix Type	Fig.	Description	Price Each
651-2744490	FL COM SERVER RS232	F	Interface module to convert RS-232 to ethernet.	403.39

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QUATECH Wireless Device Servers and Modules

QUATECH

Products may be RoHS compliant.
Check mouser.com for RoHS status.

Quatech supplies high performance device networking and connectivity solutions. Quatech has achieved this high level of performance through quality design and manufacturing, and world-class service and support. Since 1983, Quatech has become well-known for quality by investing in meticulous design, valuable features and best-in-class components like PowerPC® microprocessor. Customers also enjoy responsive, U.S.-based support. We deliver expert pre- and post-sales, technical support and specialized customization services for both large and small projects. Quatech's products are used in a wide variety of markets including banking, retail, airports, medical, traffic control, access control and security.

QUATECH WIRELESS MODULES AIRBORNE™ EMBEDDED WIRELESS

AirborneTM is a line of highly integrated 802.11 modules. The wireless module includes a radio, a base-band processor, an application processor and software for a "drop-in" web-enabled WiFi solution. Since there's no need to develop the software, or to develop the RF and communications expertise in-house, OEM's can realize reduced product development costs and a quick time-tomarket. AirborneTM modules provide instant LAN and Internet connectivity, and connect through standard serial interfaces to a wide variety of applications.

RoHS Compliant

- Type: Device Server, except 600-WLNB-ET-DP101-G - Ethernet Bridge

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Quatech Part No.	Fig.	Description	Price Each 1	10	25
600-WLNB-AN-DP101-G	WLNB-AN-DP101-G	A	Universal interface to 802.11b Serial Module	119.97	112.23	98.30
600-WLNB-SE-DP101-G	WLNB-SE-DP101-G	A	RS-232/422/485 to 802.11b Serial Module	119.97	112.23	98.30
600-WLNB-EK-DP001-G	WLNB-EK-DP001-G	B	Universal interface to 802.11b Serial Module, Eval Kit, includes Wireless Access Point	502.74	470.31	411.92
600-WLNB-ET-DP101-G	WLNB-ET-DP101-G	A	Ethernet to 802.11b Module	119.97	112.23	98.30

QUATECH WIRELESS BOARDS

When you need unmatched performance, ease of use and reliability, ask for Quatech.
Quatech features the highest throughout and lowest latency available in device server technology.

Features:

- Includes the fastest and easiest Installation Wizard available
- A built-in Web server makes configuration and support available via Web browser
- Freescale™ architecture is the industry standard in networking solutions
- PowerPC® processor eliminates data bottlenecks and common latency issues
- Serial baud rates to 921 kbps and autonegotiating 10/100 Ethernet support means fast serial and network data transfers
- Operating modes such as serial tunneling, IP multicast, virtual COM ports and other protocols provide true flexibility and easy integration

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Quatech Part No.	Fig.	Description	Price Each 1	10	25
600-SSE-100D-EMB	SSE-100D-EMB	C	Board & Cable, 1 port RS-232, surge suppression	163.20	158.00	152.81
600-DSE-100D-EMB	DSE-100D-EMB	C	Board & Cable, 2 port RS-232, surge suppression	215.01	208.16	201.32

QUATECH EXTERNAL WIRELESS DEVICE SERVERS AIRBORNEDIRECT™

AirborneDirectTM is a family of fully integrated 802.11 wireless LAN device server products designed to provide wireless LAN and Internet connectivity to transportation, medical, warehouse logistics, POS, industrial, military and scientific applications. The highly integrated hardware and software enables plug-and-play capability. This significantly reduces the complexity of wireless system deployment and network connectivity. Integrating AirborneDirectTM with existing OEM platforms can significantly enhance the product's value and functionality giving the OEM a competitive advantage.

RoHS Compliant

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Quatech Part No.	Fig.	Description	Price Each 1	10	25
600-ABDB-SE-DP101-G	ABDB-SE-DP101-G	---	1 port RS-232/422/485 (DB-9) to 802.11b	231.57	216.63	189.74
600-ABDB-SE-DP107-G	ABDB-SE-DP107-G	---	1 port RS-232 (DB-9) to 802.11b, powered by host device via serial	231.57	216.63	189.74
600-ABEB-SE-DP101-G	ABEB-SE-DP101-G	---	1 port RS-232/422/485 (DB-9) to 802.11b, Eval Kit, includes Wireless Access Point	259.47	242.73	212.60

QUATECH EXTERNAL WIRELESS ETHERNET BRIDGES AIRBORNEDIRECT™

Integrating AirborneDirectTM with existing OEM platforms can significantly enhance the product's value and functionality giving the OEM a competitive advantage. The Evaluation & Design Kit provides software and utilities that allow a developer to quickly and easily operate and evaluate the Bridge.

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Quatech Part No.	Fig.	Description	Price Each 1	10	25
600-ABDB-ET-DP101	ABDB-ET-DP101	D	Ethernet to 802.11b Adapter	203.67	190.53	166.88
600-ABEB-ET-DP101	ABEB-ET-DP101	D	Ethernet to 802.11b Adapter, Eval Kit, includes Wireless Access Point	259.47	242.73	212.60

QUATECH EXTERNAL WIRELESS DEVICE SERVERS - PREMIUM

All Quatech Wireless Device Servers offer a simple, integrated configuration process and the embedded 802.11b wireless radio from DPAC offers superior power and receive sensitivity. Combined with the industry's best processor, a PowerPC® from Freescale™, these models incorporate a world-class architecture that ensures compatibility with market-leading wireless infrastructures, boosts throughput and reduces latency to the lowest levels possible. This allows a broader range of serial devices to communicate over a wireless Ethernet network without modifying host software designed to use COM ports.

RoHS Compliant

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Quatech Part No.	Fig.	Description	Price Each 1	10	25
600-SSEW-100D	SSEW-100D	---	1 port RS-232 (DB-9), 802.11b	323.81	313.50	303.19
600-SSEW-100D-SS	SSEW-100D-SS	---	1 port RS-232 (DB-9), 802.11b, surge suppression	332.45	321.86	311.27

QUATECH EXTERNAL DEVICE SERVERS

Quatech's serial device servers are featuring a PowerPC® from Freescale™ (formerly Motorola® Semiconductor). This processor is part of a world-class architecture that offers the lowest latency available anywhere. In addition, the auto-sensing 10/100 Ethernet interface, and Quatech's proven high-speed, 921k-baud serial technology offer the best performance in the industry and ensure that your critical business applications won't be harmed by data throughput issues.

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Quatech Part No.	Fig.	Description	Price Each 1	10	25
600-SSE-100D	SSE-100D	E	1 port RS-232 (DB-9)	215.88	209.00	202.13
600-SSE-400D	SSE-400D	E	1 port RS-232/422/485 (DB-9)	237.46	229.90	222.34

QUATECH ACCESSORIES - ANTENNAS

For quantities of 50 and up, call for quote.

600-ACH2-AT-DP002	ACH2-AT-DP002	---	2Dbl Portable (Rubber duck) (RP-SMA)	13.59	13.40	12.50
600-ACH2-AT-DP003	ACH2-AT-DP003	F	5Dbl Portable (Rubber duck) (RP-SMA)	15.74	15.52	14.48
600-ACH2-AT-DP004	ACH2-AT-DP004	---	5Dbl Portable (Rubber duck), Flying Lead (U.FL)	17.03	16.79	15.66
600-ACH2-AT-DP011	ACH2-AT-DP011	---	5dBi Magnetic mount vehicle, Indoor / Outdoor	38.64	38.09	35.54
600-ACH0-CA-DP004	ACH0-CA-DP004	---	Adapter Cable, RP-SMA (Jack) to U.FL (Plug), 100mm, Indoor/Outdoor	14.88	14.67	13.69

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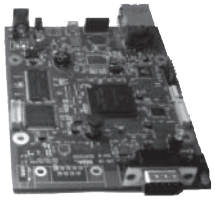

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RABBIT Wireless Application Kits

BLUETOOTH RADIO MODULE APPLICATION KIT

Bluetooth Application Kit The Bluetooth Application Kit provides all of the hardware and software necessary to develop a Bluetooth application. The Application Kit includes an RCM3100, EmbeddedBlue eb506-AHC-IN Bluetooth Radio Module, prototyping board, and miscellaneous cables and hardware. The Application Kit also includes the Dynamic C Integrated Development Environment, Bluetooth drivers, libraries, sample programs, and manuals.

Features and Benefits:

- Bluetooth radio modules plug directly into supported RCMs and SBCs
- Simple serial UART communications and control
- Seamless connectivity with any Bluetooth device
- 2.4 GHz FHSS (Frequency Hopping Spread Spectrum) technology ensures high reliability and is robust to interference
- Low current consumption for long battery life
- Complete with sample applications and source code
- Internal Surface-mount antenna.

Features	EmbeddedBlue eb506-ACH-IN
Transmit Power	4dBm (max) class 2 operation
Open Field Range	More than 50 meters (164 feet)
Receiver Sensitivity	-85dBm
Operating Temperature	0° to 70° C
Supply Power	3.3 VDC
Interfaces	3.3 V logic level UART Baud rate: 9.6 k – 230.4 k
Connectors	Two 17-pin 2 mm headers
Antenna	Internal surface mount
Bluetooth Support	Version 1.2 compliant (L2CAP, RFCOMM, SDP, SPP)
Firmware	Upgradeable via PC application

MOUSER STOCK NO. Mfr.	MOUSER STOCK NO. Mfr. Part No.	Description	Price Each
	694—101-1040	Bluetooth Application Kit	339.00

WI-FI (802.11B) APPLICATION KIT

Integrating Wi-Fi (IEEE 802.11b) with a RabbitCore™ Development Kit, embedded system integrators can now enable a wireless embedded system. Wireless connectivity eliminates Ethernet cables allowing for greater flexibility and mobility of wireless embedded Networks.

Z-World's Wi-Fi Applications Kit provides all the tools necessary to sample and design communications from a Rabbit-based device to a WiFi-enabled device (i.e. PC Laptop or any device using a Compact Flash based Wi-Fi card). The libraries and sample programs allow for a Wi-Fi card to send and receive data to/from a RabbitCore module (RCM) over a wireless connection. The RCM can also send/receive email from any PC or device with a compatible Wi-Fi card. The Wi-Fi Applications Kit includes Z-World's Dynamic C software with royalty-free TCP/IP stack.

Features and Benefits:

- Kit developed w/ LinkSys WCF12 Wi-Fi Card
- Other compatible WI-Fi cards are Sandisk, Netgear, SMC, and D-Link
- Seamless connectivity with any Bluetooth device
- 2.4 GHz FHSS (Frequency Hopping Spread Spectrum) technology ensures high reliability and is robust to interference
- Low current consumption for long battery life
- Complete with sample applications and source code
- Internal Surface-mount antenna.

Features	Wi-Fi Application Kit
Microprocessor Core Module	RCM3100 RabbitCore module @ 29.4 MHz
Prototyping Board	Standard RCM3100 Prototyping Board
Serial Ports	RS-232 (2 3-wire or 1 5-wire). Additional CMOS ports available on RCM3100
Protocol	IEEE 802.11b (Wi-Fi) 11Mbps, 2.4 GHz
Compact Flash Connector	Type 1 Compact Flash Adapter: I/O CF based 802.11b Dual 2 x 17, 0.1" pitch socket strip
Software Compiler	Dynamic C with TCP/IP stack

MOUSER STOCK NO. Mfr.	MOUSER STOCK NO. Mfr. Part No.	Description	Price Each
	694—101-0911	Wi-Fi (802.11b) Application Kit	599.00
	694—101-0997	Wi-Fi add on Kit for RCM3000-3360	199.00
	694—101-0998	Wi-Fi add on Kit for RCM3400	199.00
	694—101-0999	Wi-Fi add on Kit for RCM3600-3700	199.00
	694—101-1000	Wi-Fi add on Kit for PowerCore Flex	199.00

GPRS/GSM APPLICATION KIT

Cell phones are not the only devices that can communicate in a GSM network –a Rabbit-based control device is also on the list. Imagine your machines notifying you when they need servicing change settings from anywhere in the world upload data wirelessly send commands from one machine to another receive vehicle location/conditions via e-mail.

Z-World's GPRS/GSM Application Kit provides all the tools necessary to sample and develop applications that combine a Rabbit-based control device with a GSM/GPRS modem. The libraries and sample programs allow for a device connected to the cellular network to send SMS (text) messages to a RabbitCore module (RCM) that can interpret messages as commands and in turn execute control functions. The RCM can also send/receive GPRS e-mail wirelessly to/from any PC, GSM device, or cell phone. The LCD/keypad module included in the GPRS/GSM Application Kit incorporates a menu system that provides for an easy interface to read or send text messages and e-mail.

Features and Benefits:

- Hardware/Software for wireless RCM communication and control via GPRS/GSM.
- EnforaTM Spider SA-GL Quad Band wireless modem and antenna.
- GUI and Keypad configuration menu system.
- Royalty-free TCP/IP stack in source code.
- Sample programs/libraries for generic modem operation.
- Fully integrated development software: compiler, editor, and debugger for control applications.

Features	GPRS/GSM Application Kit
Microprocessor Core Module	RCM3100 RabbitCore module @29.4MHz
Prototyping Board	Standard RCM3100 Prototyping Board
Serial Ports	6 CMOS-compatible ports available on RCM3100
Display	122 x 32 Keypad/Display Unit with LCD menu system
GSM Modem	Enfora Spider SA-GL Quad Band GSM/GPRS modem
Antenna	1/2 Wave Device R/A Antenna. (1850-1990 MHz)
SIM Card (Sold separately)	Available through wireless service provider or AIRDESK
Software Compiler	Dynamic CTM with TCP/IP stack
Software Libraries	GPRS/SMS modes, Modem-specific Library
Additional Libraries	Dynamic C PPP module, Generic Modem Library
Sample Programs	For SMS and GPRS communications and control. FTP datalogging,TCP/IP, SMTP, POP3, Telnet
Menuing System	For display of SMS and GPRS communications
Power Supplies	12VDC adapter for RCM3100, 5V DC for Enfora Modem

MOUSER STOCK NO. Mfr.	MOUSER STOCK NO. Mfr. Part No.	Description	Price Each
	694—101-0948	GPRS/GSM Application Kit	649.00

RADIOTRONIX Embedded Wireless Modules

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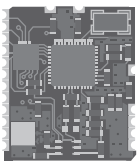
Check mouser.com for RoHS status.

WI.232DTS/EUR UART-TO-RF EMBEDDED WIRELESS MODULES

The Wi.232DTS/EUR module combines a state-of-the art low power wireless transceiver with a powerful multipoint-to-multipoint protocol controller to form a transparent wireless communication solution capable of replacing wires in any RS-232/422/485 application. With a 120dB link budget and very low power operating modes, the Wi.232DTS/EUR module is excellent for AMR, RFID, Home Automation, and any other application requiring long range (<1500ft LOS) and long battery life . The Wi.232DTS module is designed for North American operation in the 902-928 MHz band. The Wi.232EUR module is designed for European operation in the 868-870 MHz band.



Wi.232DTS/EUR Module

WI.232DTS/EUR EVALUATION MODULES

EVMs were created as an easy-to-use prototyping tool for our Wi. family of surface mount modules. Each EVM is populated with the appropriate module, a LDO regulator, a SMA connector, and two pinned headers. Customers can prototype with these modules without having to be concerned with RF specific design considerations. Therefore, these modules are ideal for hobbyists or engineers that need to get a quick proof of concept prototype working. To properly evaluate the range performance of the modules, Radiotronix does recommend the use of our RAD kits.

WI.232DTS/EUR DEVELOPMENT KITS (RAD)

The RAD kit for the Wi.232DTS/EUR modules is designed to support rapid evaluation and development using the modules. The RAD boards have both USB and RS-232 interfaces. All module pins are brought to a prototyping header. A prototyping area is provided. The boards are powered from either three on-board AAA batteries, or an external wall transformer. Software is provided to simplify evaluation/testing of the modules. Wi.232 kits support putting one board in loop-back mode for range testing.

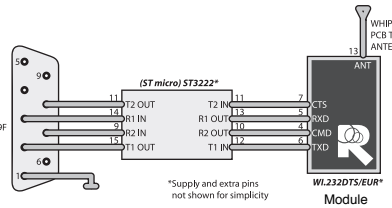
Wi.232DTS/EUR Modules Features:

- Small Size - .8"x.935"x.08"
- PHY/ MAC layer protocol built in
- CSMA medium access control
- Channel quality of service indicator
- 114 dB link budget in DTS mode
- 5 volt tolerant I/O
- Data encryption/ encoding for PGP
- 16 bit CRC data checking
- True UART to RF solution
- Range up to 1500ft Line of Sight
- Data Rate up to 152.34 kBps

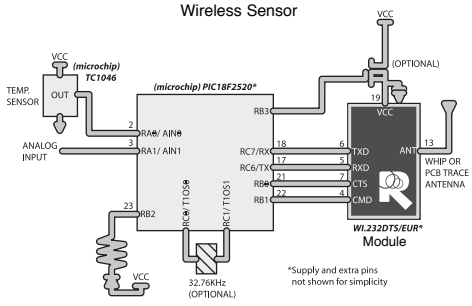
Development Kit Contents:

Qty 2 - RAD boards
Qty 2 – EVM populated with the appropriate modules
Qty 2 – Whip antennas
Qty 2 – RS-232 cables
Qty 2 – USB cables
Qty 1 – Documentation/Software CD
Qty 6 – AAA batteries

Example Application for WI.232DTS/EUR Modules
Wireless RS-232 Connection



Wireless Sensor



Wi.232DTS/EUR Development Kits

MOUSER STOCK NO.	Radiotronix Part Number	Frequency (MHz)	Description	Price Each
509-RK-WI232DTS	RK-Wi.232DTS	902-928	Wi.232DTS Rapid Development Kit	249.00
509-RK-WI232EUR	RK-Wi.232EUR	868-870	Wi.232EUR Rapid Development Kit	249.00

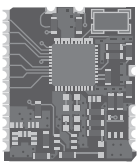
Wi.232DTS/EUR Embedded Modules

For quantities of 500 and up, call for quote.

MOUSER STOCK NO.	Radiotronix Part Number	Frequency (MHz)	Description	Price Each 1	10	25	100
900 MHZ - North America							
509-WI232DTS-R	Wi.232DTS-R	902-928	Wi.232 DTS Embedded Wireless Module	30.32	27.90	25.66	23.61
509-WI232DTS-EVM-R	Wi.232DTS-EVM-R	902-928	Wi.232DTS Evaluation Module - Pre-Mounted Wi.232DTS Module for Rapid Prototyping and Low Volume	40.86	37.60	34.58	31.82
868 MHZ - Europe							
509-WI232EUR-RS	Wi.232EUR-R	868-870	Wi.232 EUR Embedded Wireless Module (RoHS)	31.39	28.88	26.56	24.44
509-WI232EUR-EVM-RS	Wi.232EUR-EVM-R	868-870	Wi.232EUR Evaluation Module - Pre-Mounted Wi.232DTS Module for Rapid Prototyping and Low Volume (RoHS)	41.54	38.27	35.15	32.35

WI.M900/868 RF-ONLY DROP-IN EMBEDDED WIRELESS MODULES

The Wi.M series of modules are microcontroller-less variations of the popular Wi.232 family of modules. They offer the same excellent RF performance, yet allow the design engineer to control the radio at the physical level using any microcontroller. They are an excellent choice when product cost is a critical issue or when support of legacy protocols is required. The modules in the family are footprint compatible with the entire Wi.module family. This gives the designer a level of flexibility not offered by others. Additional, the Wi.M family of modules are all factory calibrated and the calibration constants are stored in non-volatile memory on the module. By using these constants, the designer can calibrate the module in software, eliminating the need for RF testing in production. A typical circuit consists of a low-cost microcontroller, a power source, a Wi.M900X module, and an antenna. The Wi.M modules are designed to work with any microcontroller that is equipped with a hardware or software SPI port, including Microchip microcontrollers, Rabbit microcontrollers and core modules, BASIC stamps, NETBURNER core modules, and many others.



Wi.M900/868 Module

WI.M900/868 EVALUATION MODULES

EVMs were created as an easy-to-use prototyping tool for our Wi. family of surface mount modules. Each EVM is populated with the appropriate module, a LDO regulator, a SMA connector, and two pinned headers. Customers can prototype with these modules without having to be concerned with RF specific design considerations. Therefore, these modules are ideal for hobbyists or engineers that need to get a quick proof of concept prototype working. To properly evaluate the range performance of the modules, Radiotronix does recommend the use of our RAD kits.

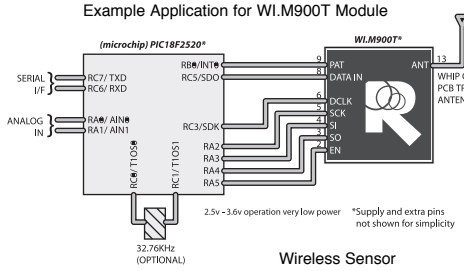
WI.M900/868 DEVELOPMENT KITS (RAD)

The RAD kit for the Wi.232DTS/EUR modules is designed to support rapid evaluation and development using the modules. The RAD boards have both USB and RS-232 interfaces. All module pins are brought to a prototyping header. A prototyping area is provided. The boards are powered from either three on-board AAA batteries, or an external wall transformer. Software is provided to simplify evaluation/testing of the modules. Wi.232 kits support putting one board in loop-back mode for range testing.

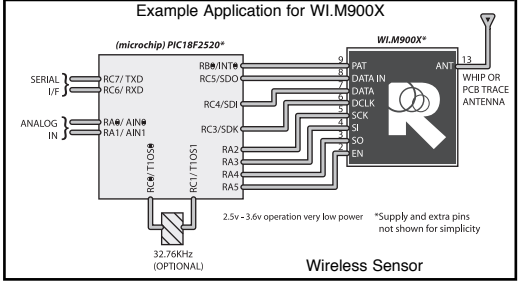
Wi.232DTS/EUR Modules Features:

- Small Size - .8"x.935"x.08"
- PHY/ MAC layer protocol built in
- CSMA medium access control
- Channel quality of service indicator
- 114 dB link budget in DTS mode
- 5 volt tolerant I/O
- Data encryption/ encoding for PGP
- 16 bit CRC data checking
- True UART to RF solution
- Range up to 1500ft Line of Sight
- Data Rate up to 152.34 kBps

Example Application for WI.M900T Module



Example Application for WI.M900X



Wi.M900X/Wi.M868X Development Kits

MOUSER STOCK NO.	Radiotronix Part Number	Frequency (MHz)	Description	Price Each
509-RK-WIM900X	RK-Wi.M900X	902-928	Wi.M900X Rapid Development Kit	249.00
509-RK-WIM868X	RK-Wi.M868X	868-870	Wi.M868X Rapid Development Kit	249.00

Development Kit Contents:

Qty 2 - RAD boards
Qty 2 – EVM populated with the appropriate modules
Qty 2 – Whip antennas
Qty 2 – RS-232 cables
Qty 2 – RS-232 cables
Qty 2 – USB cables
Qty 1 – Documentation/Software CD
Qty 6 – AAA batteries

Wi.M900X/Wi.M868X Embedded Modules

For quantities of 500 and up, call for quote.

MOUSER STOCK NO.	Radiotronix Part Number	Frequency (MHz)	Description	Price Each 1	10	25	100
900 MHZ - North America							
509-WIM900T	Wi.M900T	902-928	Transmitter Only Version of Wi.232DTS Module (Requires a MCU)	16.55	15.23	14.01	12.89
509-WIM900X	Wi.M900X	902-928	Transceiver Module of Wi.232DTS (Requires a MCU)	21.30	19.60	18.05	17.30
509-WIM900X-EVM	Wi.M900X-EVM	902-928	Wi.M900X Evaluation Module - Pre-Mounted Wi.M900X Module for Rapid Prototyping and Low Volume	39.95	38.25	36.86	33.92
868 MHZ - Europe							
509-WIM868T-RS	Wi.M868T-R	868-870	Transmitter Only Version of Wi.232EUR Module (Requires a MCU) (RoHS)	16.99	15.63	14.38	13.23
509-WIM868X-RS	Wi.M868X-R	868-870	Transceiver Module of Wi.232EUR (Requires a MCU) (RoHS)	16.55	15.23	14.01	12.89
509-WIM868X-EVM-RS	Wi.M868X-EVM-R	868-870	Wi.M868X Evaluation Module - Pre-Mounted Wi.M868X Module for Rapid Prototyping and Low Volume (RoHS)	43.56	40.08	36.86	33.92

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WI.232FHSS-25/250 FREQUENCY HOPPING EMBEDDED WIRELESS MODULES

WI.232FHSS-25

The Wi.232FHSS-25 module combines a state-of-the art low power wireless transceiver with a powerful multipoint-to-multipoint frequency protocol controller to form a complete wireless communication solution. With a simple UART interface, a 111dB link budget, and very low power operation modes the Wi.232FHSS-25 module is excellent for AMR, RFID, Home Automation, and any other application requiring long range (< 1500 feet, line of sight) and long battery life.

WI.232FHSS-250

The Wi.232FHSS-250 module combines a state-of-the art low power wireless transceiver with a powerful multipoint-to-multipoint frequency protocol controller to form a complete wireless communication solution. With a simple UART interface, a 125dB link budget, and very low power operation modes the Wi.232FHSS-250 module is excellent for AMR, RFID, Home Automation, and any other application requiring long range (7 miles LOS, 1500 feet indoors) and long battery life.

Features:
- Frequency Hopping Spread Spectrum
- 30mW TX and 250 mW TX versions
- No RF PCB Layout Necessary
- Pick and Place compatible package
- 2.7 - 3.6V power supply
- Channels: 32
- Transparent and Networking modes
- Small size: 0.8"x.935"x.08" thick for Wi.232FHSS-25
  1.25"x1.25"x .08" thick for Wi.232FHSS-250
- Hopping sequences: 6
- Max Data Rate: 115 kbps
- Temperature Range: -20º to +70ºC
- Max RX Sensitivity: -104dBm

Development Kit Contents:
Qty 2 –RAD boards
Qty 2 – EVM populated with the appropriate modules
Qty 2 – Whip antennas
Qty 2 – RS-232 cables
Qty 2 – USB cables
Qty 1 – Documentation/Software CD
Qty 6 – AAA batteries

WI.232FHSS Development Kits

MOUSER STOCK NO.	Radiotronix Part Number	Frequency (MHz)	Description	Price Each
509-RK-WI232FHSS-25	RK-Wi.232FHSS-25	902-928	Wi.232FHSS-25 Rapid Development Kit	249.00
509-RK-WI232FHSS-250	RK-Wi.232FHSS-250	902-928	Wi.232FHSS-250 Rapid Development Kit	249.00

Wi232FHSS-250 Illustrated

WI.232FHSS Embedded Modules

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	Radiotronix Part Number	Frequency (MHz)	Description	Price Each 1	10	25
25mW Transmit						
509-WI232FHSS-25	Wi.232FHSS-25	902-928	25mW Wi.232DTS Frequency Hopping Transceiver	36.01	33.13	30.47
509-232FHSS-25-EVM	Wi.232FHSS-25-EVM	902-928	Wi.232FHSS-25 Evaluation Module	47.62	43.81	40.29
250mW Transmit						
509-WI232FHSS-250	Wi.232FHSS-250	902-928	250mW Wi.232DTS Frequency Hopping Transceiver	43.66	40.17	36.94
509-232FHSS-250-EVM	Wi.232FHSS-250-EVM	902-928	Wi.232FHSS-250 Evaluation Module	53.36	49.09	45.15

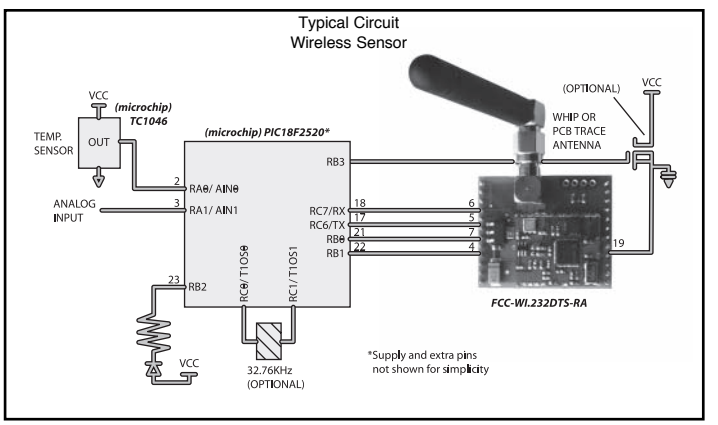
FCC PRE-APPROVED UART-TO-RF EMBEDDED WIRELESS MODULES

The FCC-Wi.232DTS/FHSS features our powerful and popular Wi.232DTS/FHSS modules in a FCC modular approved solution. It is designed to greatly simplify implementation of the Wi.232DTS module into a working design without the complications of FCC testing.

Features:
- FCC modular approved
- FCC ID: Q7V-3F090003X
- Temperature Range: -20º to +70ºC
- Through-Hole/ Socket Mounting
- 4.5-16VDC Supply Voltage
- RP-SMA Antenna Connection
- Data Rate: 152.34 kbit/sec.
- Size: 1.5" x 1.25"
- 24Pin DIP Package

Applications:
- Remote Control
- Wire Replacement
- Automated Meter Reading
- Industrial Automation
- Medical
- Security
- Home Automation
- HVAC

Typical Circuit
Wireless Sensor



Wi.232DTS-FCC

The Wi.232DTS-FCC module is a pre-certified version of the Wi.232DTS-EVM module. It is certified for use in the US and requires no FCC testing when used with any of the Radiotronix antennas. The only physical difference between the Wi.232DTS-EVM and the Wi.232DTS-FCC is that the antenna connector on the FCC version is a reverse polarity SMA. The module requires a 3.6 - 9V power supply capable of supplying 175mA continuously.

Wi.232FHSS-250-FCC

The Wi.232FHSS-250-FCC module is a pre-certified version of the Wi.232FHSS-250-EVM module. It is certified for use in the US and requires no FCC testing when used with any of the Radiotronix antennas. The only physical difference between the Wi.232FHSS-250-EVM and the Wi.232FHSS-250-FCC is that the antenna connector on the FCC version is a reverse polarity SMA. The module requires a 3.6 - 9V power supply capable of supplying 175mA continuously.

FCC-Wi.232DTS/ FHSS Embedded Modules

For quantities of 100 and up, call for quote.

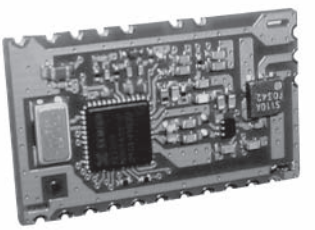
MOUSER STOCK NO.	Radiotronix Part Number	Frequency (MHz)	Description	Price Each 1	10	25
509-FCC-WI232DTS-STR	WI.232DTS-FCC-ST-R	915	FCC Pre-approved Wi.232DTS Module with Vertical RP-SMA Antenna Jack	56.37	51.86	47.70
509-FCC-WI232DTS-RA	WI.232DTS-FCC-RA	915	FCC Pre-approved Wi.232DTS Module with Right Angle RP-SMA Antenna Jack	56.37	51.86	47.70
509-FHSS-25-FCC-ST	WI.232FHSS-25-FCC-ST	915	FCC Pre-approved 25mW Wi.232FHSS Module with Vertical RP-SMA Antenna Jack	59.25	53.99	49.07
509-FHSS-25-FCC-RA	WI.232FHSS-25-FCC-RA	915	FCC Pre-approved 25mW Wi.232FHSS Module with Right Angle RP-SMA Antenna Jack	59.25	53.99	49.07
509-FHSS-250-FCC-ST	WI.232FHSS-250-FCC-ST	915	FCC Pre-approved 250mW Wi.232FHSS Module with Vertical RP-SMA Antenna Jack	67.29	61.91	56.94
509-FHSS-250-FCC-RA	WI.232FHSS-250-FCC-RA	915	FCC Pre-approved 250mW Wi.232FHSS Module with Right Angle RP-SMA Antenna Jack	67.29	61.91	56.94

WI.M900X-DP/WI.M868X-DP EMBEDDED WIRELESS MODULES

The Wi.M900X-DP/ WI.M868X-DP module is a microcontroller-less version of our popular Wi.232DTS/EUR module. It is a drop replacement for the DP1203 from Xemics. It offers the same excellent RF performance, yet allows the design engineer to control the radio at the physical level using any microcontroller. The module supports two modes of operation: wide-band and narrow-band. In wide-band mode, the channel width is 600kHz and in narrow-band mode the channel width is 200kHz. The module is configured via a simple SPI style serial interface. Data is transmitted and received using a separate digital serial interface that includes pre-amble and start of packet detection. A typical circuit consists of a low-cost microcontroller, a power source, a Wi.M900X-DP/ Wi.M868X-DP module and an antenna.

Features:
- Based on the Xemics XE1203F transceiver
- Drop in replacement for DPI 203
- Instant physical radio solution - no external RF components required
- Supports frequency hopping
- Simple FCC certification as digital spread spectrum device
- Automatic packet start detection
- 2.4 - 3.6 volt operation
- 1.2 - 152.34 k/bit sec. data rate
- A SPI style digital serial interface
- Small size (.8"x .935"x .08" thick)
- Maximum output power = +15 dBm
- Maximum RF sensitivity = 1 12 dBm
- RF sensitivity @ max data rate = -103 dBm typ
- TX current = 52 mA @ 15 dBm typ.
- RX current = 12 - 13 mA typ.
- Sleep current = 0.2 ÌA typ.

Development Kit Contents:
Qty 2 – RAD boards
Qty 2 – EVM populated with the appropriate modules
Qty 2 – Whip antennas
Qty 2 – RS-232 cables
Qty 2 – USB cables
Qty 1 – Documentation/Software CD
Qty 6 – AAA batteries



WI.M900X-DP/ WI.M868X-DP Development Kits

MOUSER STOCK NO.	Radiotronix Part Number	Frequency (MHz)	Description	Price Each
509-RK-WIM900X-DP	RK-Wi.M900X-DP	902-928	Wi.M900X-DP Rapid Development Kit	249.00
509-RK-WIM868X-DP	RK-Wi.M868X-DP	868-870	Wi.M868X-DP Rapid Development Kit	249.00

WI.M900X-DP/ WI.M868X-DP Embedded Modules

For quantities of 250 and up, call for quote.

MOUSER STOCK NO.	Radiotronix Part Number	Frequency (MHz)	Description	Price Each 1	10	25	100
509-WIM900X-DP	Wi.M900X-DP	902-928	Wi.M900X-DP Drop-in Embedded Wireless Module (North America)	23.81	21.91	20.15	18.54
509-WIM868X-DP-RS	Wi.M868X-DP-R	868-870	Wi.M868X-DP Drop-in Embedded Wireless Module (Europe) (RoHS)	23.81	21.91	20.15	18.54

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RADIOTRONIX Embedded Wireless Modules

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WI.FREESTAR ZIGBEE READY MODULES

NEW PRODUCT

Long Range Zigbee Performance:
The Wi.FreeStar module is designed around the MC13192 RF transceiver from Freescale™, which based on the IEEE802.15.4 standard. The Wi.FreeStar modules is ideally suited for use in a point to point/multipoint networks or in a ZigBee™ mesh applications. The module provides enhanced range performance over standard 802.15.4 or ZigBee implementations with an integrated 100mW power amplifier, allowing the module to communicate over 4000 feet line of sight.

Partnering with L.S. Research:
Radiotronix has worked closely with LS Research, a leading Zigbee technology company, in the development of these modules. This alliance combines the RF design and manufacturing expertise of Radiotronix with the extensive Zigbee design skill sets and FCC compliance capability of LS Research to provide customers with a great new product, strong support channel, and a flexible design platform.

Star or ZigBee™ Mesh:
The Wi.FreeStar module uses the MC13192 for the LSR Star protocol and is upgradeable to use the Freescale Bee-Stack™ ZigBee solution. The module includes the MC9S08GT60CFD uP, 100mW power amplifier, power supply, & an inverted-F PCB antenna. The module is FCC and CE certified for fast and simple integration into an end application. Radiotronix can provide product modification to accommodate specific application requirements. The Wi.FreeStar module provide the lowest cost, best in class range in a small form factor.

Features:
- Communications Modes: - Point-to-point
  - Point-to-multipoint
  - Mesh (Z-Star only)
- 4000+ feet line of sight performance
- Very small form factor 1.4" X 1.0"
- Integrated PCB Trace Antenna
- FCC, IC, and CE Certified
- Direct Sequence Spread Spectrum
- CSMA-CA
- Wireless boot loader
- Flash-based/upgradeable
- 10 Bit A/D (2 inputs)
- General Purpose I/O (8 ports)
- Microsoft® Windows®-based Configuration & Test Tool
- Simple Serial UART Interface
- Over 65,000 network addresses

RoHS Compliant

MOUSER STOCK NO.	Radiotronix Part Number	Description	Price Each 1	10	25	100
509-WI.FS24-100ST	WI.FS24-100ST	Long range Zigbee module	34.40	30.96	28.74	27.15
509-RK-WI.FS24-100ST	RK-WI.FS24-100ST	Long range Zigbee module evaluation kit	249.00	-	-	-

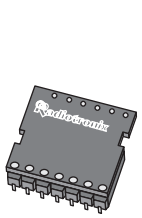
EWD-900-HDTC MODULE (DATA)

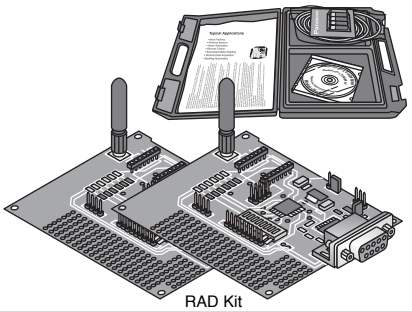
The EWD-900-HDTC is an embedded wireless module based on the CC1000 transceiver from ChipCon. It can operate in the 902-928 MHz band for the US and the 868-870 MHz band for Europe. It is a good choice for short range applications where size is a consideration. An on-board EEPROM stores calibration information and a unique 48-bit MAC address.

Features:
- Operating temperature: 0°C to 70°C
- Small size: 0.7 x 0.7 x .20"
- Easy to use through hole package
- Works in 902-928 and 868-870 MHz bands
- Maximum data rate is 33.6kbit/second
- 2.7-3.3V power supply

Applications:
- Automatic Meter Reading
- Wireless Lighting
- Industrial Automation
- RFID
- Home Automation

Development Kit Contents:
- Qty 2 – RApid Development boards
- Qty 4 – EWD-900-HDTC modules
- Qty 2 – RS-232 serial DB-9 cables
- Documentation/Software CD
- Supports rapid evaluation and development with EWD-900-HDTC Modules


EWM-900-HDTC


RAD Kit

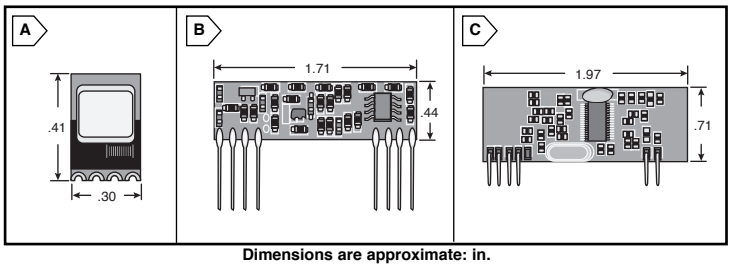
MOUSER STOCK NO.	Radiotronix Part Number	Description	Price Each 1	10	25
509-EWD-900-HDTC	EWD-900-HDTC	128 channel transceiver module based on Chipcon's CC1000 chipset	30.55	28.11	25.85
509-RK-900-HDTC	RK-900-HDTC	Rapid Development Kit for EWD-900-HDTC	249.00	-	-

REMOTE CONTROL MODULES

RCT Series Transmitters
The RCT series of remote control OOK transmitter modules from Radiotronix are the smallest, lowest cost transmitter modules available. They are very easy to apply, just connect a data source, antenna, and power. RCT transmitters are compatible with our RP and HP series receivers. These modules operate from 2-12V.

RCR-RP Series Receivers
The RCR-RP series of remote control receiver modules from Radiotronix allow the designer to create a very low cost, wireless link capable of operation at up to 300 feet. The RP modules are based on a super-regenerative receiver architecture, allowing them to work with virtually any AM/ASK/OOK transmitter available, including SAW and LC based transmitters. These modules operate at 5V.

RCR-HP Series Receivers
The RCR-HP series of remote control receiver modules from Radiotronix offer better performance than the RP series. The receiver is based on a super-heterodyne architecture, making the receiver much more immune to outside interference. When coupled with our RCT transmitters, a very simple RF link is formed that is capable of operation over distances of up to 1000 feet. These modules are available in 3V and 5V versions.



Dimensions are approximate: in.

For quantities of 250 and up, call for quote.

MOUSER STOCK NO.	Radiotronix Part Number	Fig.	Frequency (MHz)	Modulation	Baud Rate	Range (ft.)	Price Each 1	10	25	100
Transmitters										
509-RCT-315-AS	RCT-315-AS	A	314.3 - 315.7	ASK/OOK	300 - 2400	100 - 300	4.01	3.45	3.14	2.93
509-RCT-418-AS	RCT-418-AS	A	417.3 - 418.7	ASK/OOK	300 - 2400	100 - 300	4.01	3.45	3.14	2.93
509-RCT-433-AS	RCT-433-AS	A	433.85 - 433.99	ASK/OOK	300 - 2400	100 - 300	3.75	3.17	2.92	2.72
Receivers										
509-RCR-315-RP	RCR-315-RP	B	311 - 318	ASK/OOK	300 - 4800	100 - 300	5.68	4.88	4.44	4.14
509-RCR-418-RP	RCR-418-RP	B	415 - 421	ASK/OOK	300 - 4800	100 - 300	5.68	4.88	4.44	4.14
509-RCR-433-RP	RCR-433-RP	B	431 - 437	ASK/OOK	300 - 4800	100 - 300	4.95	4.55	4.17	4.05
509-RCR-315-HP	RCR-315-HP	C	311 - 318	ASK/OOK	300 - 4800	300 - 800	17.93	15.41	14.01	13.08
509-RCR-315-HP3V	RCR-315-HP3V	C	311 - 318	ASK/OOK	300 - 4800	300 - 800	17.93	15.41	14.01	13.08
509-RCR-433-HP	RCR-433-HP	C	431 - 437	ASK/OOK	300 - 4800	300 - 800	17.93	15.41	14.01	13.08
509-RCR-433-HP3V	RCR-433-HP3V	C	431 - 437	ASK/OOK	300 - 4800	300 - 800	17.93	15.41	14.01	13.08

ANTENNAS AND CONNECTORS

For quantities of 250 and up, call for quote.

MOUSER STOCK NO.	Radiotronix Part Number	Description	Price Each 1	10	25	100
Antennas						
509-ANT-915-02A	ANT-915-02A	900 MHZ, 1/4 Wave Whip, RPSMA connector	7.26	6.24	5.67	5.29
509-ANT-915-01A	ANT-915-01A	900 MHZ, Helical Whip, SMA connector	6.78	5.82	5.30	4.94
509-ANT-915-07A	ANT-915-07A	900 MHZ, Helical right angle, RPSMA connector	6.78	5.82	5.30	4.94
509-ANT-915-06A	ANT-915-06A	900 MHZ, 1/2 Dipole, RPSMA Connector	12.29	10.56	9.60	8.96
509-ANT-915-05A	ANT-915-05A	900 MHZ, Helical Whip, right angle SMA Connector	7.26	6.24	5.67	5.29
509-ANT-915-04A	ANT-915-04A	900 MHZ, Helical Whip, RPSMA Connector	6.78	5.82	5.30	4.94
509-ANT-915-03A	ANT-915-03A	900 MHZ, 1/4 Wave Whip, SMA Connector	12.29	10.56	9.60	8.96
509-ANT-868-01A	ANT-868-01A	868 MHZ, Helical Whip, RPSMA Connector	8.95	7.69	6.99	6.52
509-ANT-868-02A	ANT-868-02A	868 MHZ, 1/4 Wave Whip, SMA Connector	12.29	10.56	9.60	8.96
PCB RF Connectors						
509-CON-RPSMA-ST	CON-RPSMA-ST	PCB thru-hole, straight RPSMA connector	2.86	2.46	2.24	2.09
509-CON-RPSMA-RA	CON-RPSMA-RA	PCB thru-hole, right angle, RPSMA connector	3.05	2.62	2.39	2.23
509-CON-RPSMA-EM	CON-RPSMA-EM	PCB edge mount RPSMA connector	2.67	2.29	2.09	1.95

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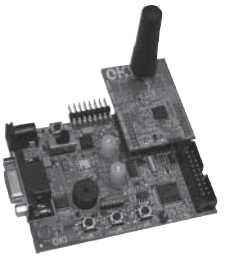
ZigBee™ Embedded Modules and Development Kits

OKI ZIGBEE

NEW FROM SUPPLIER



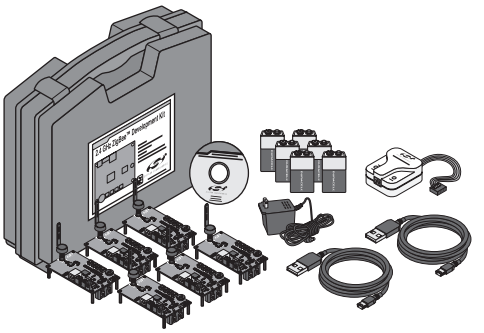
MOUSER STOCK NO.	Oki Semiconductor Part No.	Description	Price Each
848-OKI-ZNED-01	OKI-ZNED-01	Zigbee Developer's Kit	78.00
848-OKI-ZDK-01	OKI-ZDK-01	Zigbee Network Evaluation/Developers	520.00
848-ML7065-03GDZA3A	ML7065-034GDZA3A	Zigbee Single Chip	5.65

2.5 GHZ ZIGBEE™ DEVELOPMENT KIT

The 2.4 GHz ZigBee Development kit contains everything necessary to demonstrate and develop a six-node ZigBee network. The ZigBee Demonstration Software provides a quick and convenient graphical PC-based demonstration with no programming required. A complete development environment is provided in the kit for those wishing to develop a custom ZigBee application. The development environment includes an IDE, evaluation C compiler, software libraries, and a code example.

Development Kit Contains:

- (6) 2.4 GHz 802.15.4/ZigBee Target Boards
- (6) Antennas
- (6) 9 V batteries
- 2.4 GHz ZigBee Development Kit User's Guide
- CD-ROM. CD content includes the following:
  Silicon Laboratories Integrated Development Environment (IDE)
  Keil Software 8051 Development Tools (evaluation assembler, linke and C compiler) ZigBee Application Programming Interface (API) library Source code examples and register definition files
  2.4 GHz ZigBee Demonstration Software Documentation
- AC to DC power adapter
- USB debug adapter (USB to debug interface)
- (2) USB cables



Development Kit

MOUSER STOCK NO.	Silicon Laboratories Part No.	Price Each
634-ZIGBEE-2.4-DK	ZIGBEE-2.4-DK	950.00

Development Kit Hardware:
The 2.4 GHz ZigBee Development Kit includes six target boards. These boards are all identical and may be used for demonstration or development. Each board features a Silicon Laboratories C8051F121 microcontroller and a Chipcon CC2420 2.4 GHz 802.15.4 transceiver. Support components include a USB interface, JTAG programming interface, a variety of pushbuttons and LED's, and a voltage regulator.

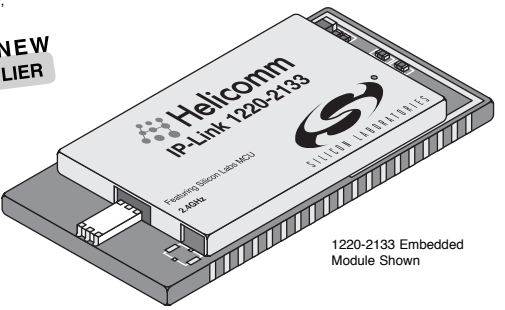
2.4 GHZ ZIGBEE™ EMBEDDED OEM MODULES

Helicomm's award-winning products allow you to quickly and easily integrate wireless networking solution and increase your competitive advantage. Helicomm's highly integrated IP-Link Modules simplify wireless integration and reduce development cycles by six months or more. Each IP-Link embedded module includes an IEEE 802.15.4-compliant radio, a Silicon Laboratories 8051 microcontroller, programmable I/O, flexible antenna and range solutions, and ZigBee-Ready IP-Net " networking software.

Module Specifications:

- Frequency: 2.4GHz
- Max Data Rate: 250Kbps
- Receive Sensitivity: -94dBm
- Transmit Range: 150m (122x-2033 Models)
  400m (122x-2133 Models)
- Data Encryption: 128-bit AES
- Antenna: On Board Chip
- Certification: FCC Part 15, CE
- Transmit Power: 55mA (122x-2033 Models)
  100mA (122x-2133 Models)
- Receive Power: 55mA (122x-2033 Models)
  100mA (122x-2133 Models)
- Microcontroller: Silicon Laboratories, 8051 based
- Transceiver Chip: Chipcon CC2420
- Model (122x-2033) Size: 1.6 x 0.7 x 0.2 in.
  41x19x4 mm
- Model (122x-2133) Size: 1.8 x 0.7 x 0.2 in.
  46x19x4 mm
- Operating Temp.: -20°C to +70°C
- Humidity: 10% - 90%
- Physical Pins: 62 (122x-2033 Models)
  70 (122x-2133 Models)
- RF Channels: 16 (5MHz)

NEW SUPPLIER



1220-2133 Embedded Module Shown

Embedded Modules

For quantities of 1000 and up, call for quote.

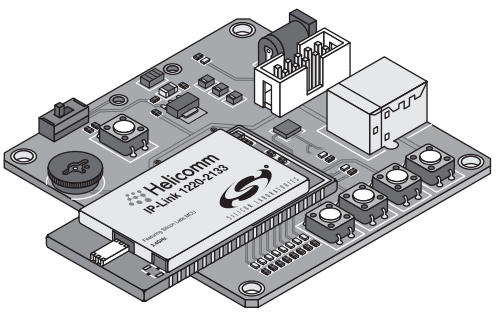
MOUSER STOCK NO.	Helicomm Part No.	Silicon Laboratories MCU Part No.	Flash (kB)	RAM (kB)	Serial	Output Power (dBm)	Price Each 1	Price Each 100
857-1220-2033	1220-2033	C8051F121	128	8	2 RS232, JTAG	0	45.01	41.10
857-1221-2033	1221-2033	C8051F133	64	8	RS232, SMB, JTAG	0	33.43	30.52
857-1220-2133	1220-2133	C8051F121	128	8	2 RS232, JTAG	+ 15	52.24	47.70
857-1221-2133	1221-2133	C8051F133	64	8	RS232, JTAG	+ 15	40.65	37.12

EZDK 1220PA DEVELOPMENT KIT FOR OUT-OF-THE- BOX ZIGBEE™ NETWORKING

Use your EZDK 1220PA Kit to implement and test both simple and sophisticated networks of IP-Link Modules. Helicomm's WIN-View Software lets you individually program Modules, build Networks and view Network Summary Tables. Test your Network's robustness by inducing link breakages using the blacklisting function and observing resultant Network behavior. Link and Network level reliability test and monitoring functions let you evaluate Network reliability over time. The power that the EZDK 1220PA gives you to rapidly build and test Module and Network configurations translates to saved time and money and reduced development risk.

Development Kit Contains:

- (6) 2.4 GHz IP-Link Boards with integral IPLink 1220PA Modules
- WIN-View Networking Management Software
- Complete documentation including Module API specifications, networking examples and tutorials
- All required cables and power supplies



ZigBee IPLink Development Board

Development Kit

MOUSER STOCK NO.	Helicomm Part No.	Price Each
857-EZDK-1220PA	EZDK-1220PA	2490.00

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GPS Modules and Development Tools

Products may be RoHS compliant.
Check mouser.com for RoHS status.

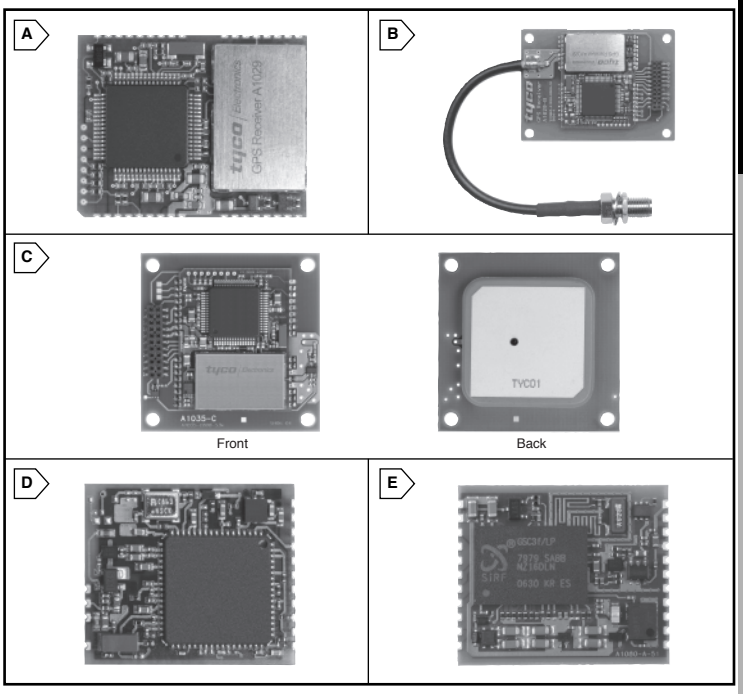
Tyco Electronics
Authorized Distributor

With the mission of supporting our customers to implement GPS functionality into their systems, Tyco Electronics is offering a large product portfolio to cover almost all integration possibilities in an easy way. All GPS products are manufactured in our ISO9001 and TS16949 certified factory inside the EU. Beyond that our modules follow RoHS standards and are 100% electrically and functionally tested prior to packaging.

GPS RECEIVER MODULES

	A1029-C	A1029-D	A1035-C	A1037-A	A1080-A
1 PPS	✻	✻		✻	✻
Active Antenna	✻	✻	✻	✻	✻
Passive Antenna	✻	✻			
Onboard Patch Antenna			✻		
Status Detection Antenna	✻	✻			
Assisted GPS	✻	✻	✻	✻	✻
Plug-in Connection			✻	✻	
Solderable Connection	✻	✻			✻
Dead Reckoning	✻✻	✻✻			
Differential GPS RTCM Input	✻	✻			
Programmable Flash	✻	✻	✻		
GPIO	✻✻✻	✻✻✻			
GPS/UTC Raw Data	✻	✻	✻		✻
I2C Interface	✻✻✻	✻✻✻			
Memory-free Flash (Byte)	80k	80k	80k		
Memory-free SRAM (Byte)	16k	16k	16k		
Available Power Processor	3 MIPS	3 MIPS	3 MIPS		
ROM				✻	✻
SBAS Support	✻	✻	✻	✻	✻
SPI Interface	✻	✻	✻		
TCXO	✻	✻	✻		✻
UART NMEA	✻	✻	✻	✻	✻
UTM Projection	✻	✻	✻		

✻ Standard Firmware: Revision 1xx
✻✻ Standard Firmware: Revision 2xx
✻✻✻ With Custom Firmware Support



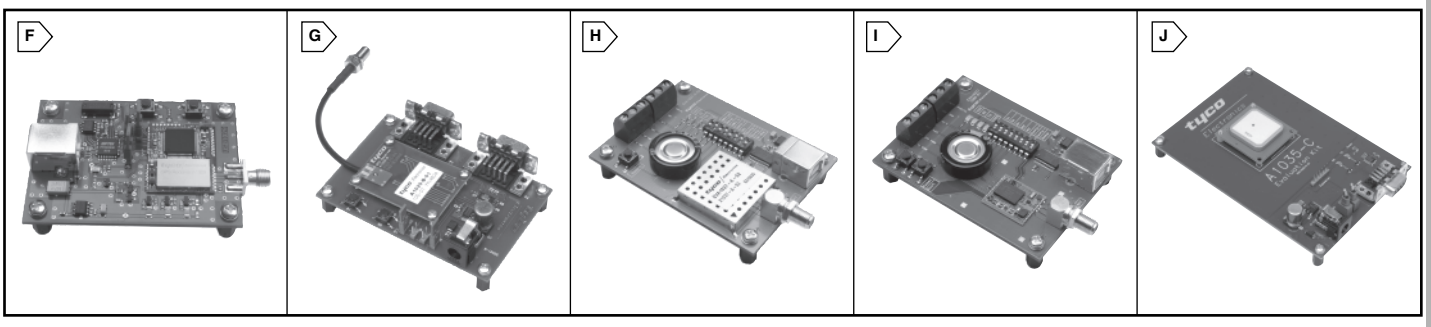
For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	Tyco Electronics Part No.	Fig.	Description	Price Each 1	10	50
340-V23993-A1029-C	V23993-A1029-C	A	GPS Receiver Module with TXCO (SMD)	44.95	42.75	39.95

For quantities of 160 and up, call for quote.

MOUSER STOCK NO.	Tyco Electronics Part No.	Fig.	Description	Price Each 1	16	80
340-V23993-A1029-D	V23993-A1029-D	B	GPS Receiver Module with TXCO (plug-in)	59.50	55.95	53.45
340-V23993-A1035-C	V23993-A1035-C	C	GPS Receiver Module with Smart Antenna	58.25	52.35	50.45
340-V23993-A1037-A	V23993-A1037-A	D	GPS Receiver Module Full NMEA (SMD)	28.95	26.25	23.95
340-V23993-A1080-A	V23993-A1080-A	E	GPS Receiver Module with SiRF Star III (SMD)	55.60	50.95	48.25

GPS DEMONSTRATION AND EVALUATION KITS



USB1029-C:
The USB1029-C is a demonstration kit for the A1029-C GPS Receiver Module. It is easily installed to you PC environment via USB connections.
Each Kit contains the following:
- A1029-C module
- Active Antenna
- USB cable
- CD w/ GPS Cockpit Software

DKS1029-D:
The DKS1029-D is a demonstration kit for the A1029-C GPS Receiver Module. This kit connects to your PC environment via RS232 connections
Each Kit contains the following:
- A1029-D module
- Active Antenna
- Serial cable
- CD w/ GPS Cockpit Software

EVA1037-A:
The EVA1037-A is an evaluation board for the A1037-A GPS Receiver Module. It is easily installed to you PC environment via USB connections.
Each Kit contains the following:
- A1037-A module
- Active Antenna
- USB cable
- CD w/ GPS Cockpit Software

EVA1080-A:
The EVA1080-A is an evaluation board for the A1080-A GPS Receiver Module. It is easily installed to you PC environment via USB connections.
Each Kit contains the following:
- A1080-A module
- Active Antenna
- USB cable
- CD w/ GPS Cockpit Software

DKS1035-C:
The DKS1035-C is a demonstration kit for the A1029-C GPS Receiver Module. This kit connects to your PC environment via RS232 connections
Each Kit contains the following:
- A1035-C module
- Active Antenna
- Serial cable
- CD w/ GPS Cockpit Software

MOUSER STOCK NO.	Tyco Electronics Part No.	Fig.	Description	Price Each
340-V23993-USB1029-C	V23993-USB1029-C	F	GPS Demonstration Kit (USB) for A1029-C Module	300.00
340-V23993-DKS1029-D	V23993-DKS1029-D	G	GPS Demonstration Kit for A1029-D Module	300.00
340-V23993-EVA1037-A	V23993-EVA1037-A	H	GPS Demonstration / Evaluation Kit for A1037-A Module	130.00
340-V23993-EVA1080-A	V23993-EVA1080-A	I	GPS Demonstration / Evaluation Kit for A1080-A Module	130.00
340-V23993-DKS1035-C	V23993-DKS1035-C	J	GPS Demonstration Kit for A1035-C Module	300.00

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CONNECT ONE iChip, Socket Modules, & Device Servers

Connect One
The Device Networking Authority

Products may be RoHS compliant.
Check mouser.com for RoHS status.

CONNECT ONE ICHIP

iChip™ updateable Internet Controller™ chips provide a cost-effective and reliable solution for embedding IP-based communication and other network services in low-cost, non-PC devices running M2M (machine-to-machine) applications. iChip mediates the connection between a host device and the Internet, operating as an embedded device server. It eliminates the need for Internet programming and avoids the hassle, risks and costs of a development project. Instead, you are assured a fast design-in, with predictable timing and budget. Typical design time is one man-month.

iChip CO120SQ:
- 64-pin TQFP form-factor, measuring 10 x 10mm
- Designed for WiFi and 10/100BaseT access
- Includes USB v2.0 Full Speed Device (client) interface
- Host interface supports 250 kbits/second in Serial mode
- Locally updatable firmware
- Operates in the industrial temperature range
- WPA/WPA2 support for WiFi

iChip CO711AG:
- Packaged in a 121-ball micro BGA form-factor
- Host interface supports 230 kbits/second in Serial mode
- Supports switchable dial-up, wireless and LAN connectivity
- Locally or remotely updatable firmware
- Supports SSL3/TLS1 protocol for secure sockets and FTP (FTPS), WEP and WPA encryption for WiFi
- Supports up to 10 simultaneous TCP or UDP sockets, two listen sockets, Web server, RAS server, SMTP and POP3 clients, MIME attachments, FTP and Telnet clients, and SerialNET™ mode for plug-and-play functionality

iChip CO710AG:
- Packaged in a 121-ball micro BGA form-factor
- Host interface supports 230 kbits/second in Serial mode
- Supports switchable dial-up, wireless and LAN connectivity
- Locally or remotely updatable firmware
- Supports up to 10 simultaneous TCP or UDP sockets, two listen sockets, Web server, RAS server, SMTP and POP3 clients, MIME attachments, FTP and Telnet clients, and SerialNET™ mode for plug-and-play functionality
- WPA/WPA2 support for WiFi

iChips

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	Connect One Part No.	Price Each		
		1	10	50
890-CO120SQ-48TI-3	CO120SQ/48TI-3	15.75	15.50	15.00
890-CO710AG-66BI-3G	CO710AG/66BI-3G	25.50	24.25	23.00
890-CO711AG-66BI-3G	CO711AG/66BI-3G	30.00	29.25	26.00

RoHS Compliant

iChip Evaluation Boards

For quantities of 100 and up, call for quote.

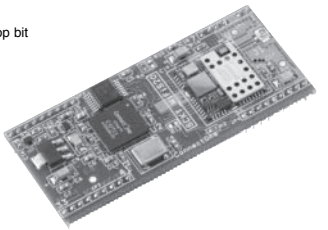
MOUSER STOCK NO.	Connect One Part No.	Description	Price Each
890-II-EVB-300-3-110	II-EVB-300-3-110	CO710AG EVB for LAN and Modem, 110V	450.00
890-II-EVB-301-3-110	II-EVB-301-3-110	CO710AG EVB for WiFi, LAN and Modem, 110V	725.00
890-II-EVB-330-3-110	II-EVB-330-3-110	CO711AG EVB for LAN and Modem, 110V	450.00
890-II-EVB-331-3-110	II-EVB-331-3-110	CO711AG EVB for WiFi, LAN and Modem, 110V	725.00
890-II-EVB-500-3-110	II-EVB-500-3-100	CO1120Q Eval Board for MODEM, 110V	275.00
890-II-EVB-501-3-110	II-EVB-501-3-110	CO120SQ EVB for LAN, 110V	275.00
890-II-EVB-511-3-110	II-EVB-511-3-110	CO120SQ EVB for WiFi, 110V	450.00

CONNECT ONE IWIFI SOCKET MODULE

Socket iWiFi Sec™ is a secure serial-to-Wireless LAN device server module that also acts as a bridge to connect serial devices to 802.11b/g Wireless LANs. It supports up to 10 simultaneous TCP/UDP sockets, two listening sockets, SMTP, MIME, POP3, FTP, Telnet, and HTTP clients, a Web server, and a serial-to-IP bridging mode. Socket iWiFi Sec supports numerous security protocols It is packaged in RoHS-compliant SocketModem™ form factor, uses the standard SocketModem pin-out, and operates in an extended temperature range.

Hardware Specifications:
- Size: 64.5 x 27.4 x 11 mm (2.54 x 1.08 x 0.433 in.).
- Operating Humidity: 90% maximum (non-condensing).
- Operating Temperature Range: -20° to 70° C (-4° to 158° F).
- Operating Voltage: 3.3v, +/- 5% DC.
- Power supply current from VDD (Operating Mode): 350 mA typical, 500 mA maximum
- Power Consumption Power Save mode: 24 mA typical, 30 mA maximum
- Power Consumption Sleep mode: 5 mA typical, 8 mA maximum
- Connector: UFL ultra-miniature coax to antenna.
- Host Interface: RS-232

Performance Specifications:
- Host Data Rate: 2,400 bps to 230 kbps
- AT+i mode: Asynchronous character: binary: 8 data bits: no parity: 1 stop bit
- SerialNET mode: Asynchronous character: binary: 7 or 8 data bits: odd, even, or no parity: 1 stop bit
- Standard Operating Mode: EIA RS-232 full duplex.
- Flow Control: hardware (DTR, RTS, CTS, DSR) and software flow control (Connect One's Wait/Continue method).
- Supports SSL3/TLS1.0 and FTPS



For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	Connect One Part No.	Description	Price Each		
			1	10	50
890-IW-SM711MS	iW-SM711MS	IWFI 8002.11 B/G Socket Module	105.00	102.00	99.00
890-II-EVB-361MS	II-EVB-361MS	Eval Board for IWFI Socket Module	275.00	--	--

RoHS Compliant

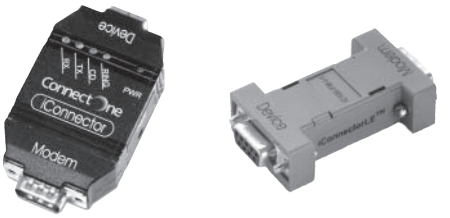
CONNECT ONE EXTERNAL DEVICE SERVERS

Wireless Internet adapters that enable any installed device to access the Internet via wireless modems and data-enabled phones that use AMPS, CDMA, CDPD, GPRS, GSM, iDEN, and TDMA networks.

iConnector™ Family

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	Connect One Part No.	Description	Price Each	
			1	10
890-IC100-FM-I-1	iC100-FM-I-1	iConnectorLE	50.00	48.00
890-IC-EVB-101-110	iC-EVB-101-110	ConnectorLE Evaluation Board, 110V	130.00	128.00
890-IC101-FM-C-0-110	iC101-FM-C-0-110	iConnector - Commercial DC 110V	101.00	98.00
890-IC101-FM-C-0	iC101-FM-C-0	iConnector - Commercial DC	95.00	93.00
890-IC101-FM-C-1	iC101-FM-C-1	iConnector - Commercial DB-9 connector	101.00	98.00
890-IC101-FM-I-1	iC101-FM-I-1	iConnector - Industrial DB-9 connector	108.00	105.00



iLAN is designed for low-resource, price-sensitive devices that require remote monitoring, diagnostics, management, data collection, and alerts. Connects devices to the Internet via a direct connection from the device's RS-232 serial port to a 10BaseT or 10/100BaseT Ethernet LANs.

iLAN™, iWiFi™ and iModem™

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	Connect One Part No.	Description	Price Each	
			1	10
890-IL100-0-110	iL100-0-110	iLAN-100 w/110V power supply	130.00	125.00
890-IW100B-0-110	iW100b-0-110	iWiFi w/ 110V power supply	225.00	220.00
890-IM336UC-SA-110	iM336UC-SA-110	iModem w/ 110V power supply	235.00	230.00

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DIGI INTERNATIONAL Embedded Modules & Development Tools

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DIGI CONNECT® ME FAMILY WIRED AND WIRELESS EMBEDDED MODULES

The industry's first interchangeable secure wired and wireless embedded modules with plug-and-play functionality and comprehensive development tools make it easy to add embedded web-enabled wired and wireless network connectivity.

Based on a unique common platform design approach, the Digi Connect® ME and Digi Connect® Wi-ME embedded modules offer complete "drop-in" integration. This allows you to build future-proof products based on a single design supporting secure wired 10/100Base-T and 802.11b wireless Ethernet connectivity. The family of Digi Connect® embedded modules makes all of this possible without the traditional complexities of hardware and software integration work, and at a fraction of the time and cost required to create custom solutions.


ME Module

Hardware:
- 32-bit NET+ARM high-performance RISC processor (NS7520 @ 55 MHz)
- Digi Connect ME on-board memory
  - 2 MB Flash and 8 MB RAM
- Digi Connect Wi-ME on-board memory
  - 4 MB Flash and 8 MB RAM
- On-board power supervisor
- High-speed TTL serial interface
  - Throughput up to 230 Kbps
  - Full signal support for TXD, RXD, RTS, CTS, DTR, DSR and DCD
  - Hardware/software flow control
- Five shared General Purpose Input/Output (GPIO) ports
- Wave-solderable design (no clean flux process)

Network Interface:
Digi Connect ME:
- Standard: IEEE 802.3
- Physical Layer: 10/100Base-T
- Data rate: 10/100 Mbps (auto-sensing)
- Mode: Full or half duplex (auto-sensing)
- Connector: RJ-45
- 802.3af mid-span power pass-through

Digi Connect Wi-ME:
- Standard: IEEE 802.11b
- Frequency: 2.4 GHz
- Data rate: Up to 11 Mbps
- Modulation: CCK (11/5 Mbps), DQPSK (2 Mbps), DBPSK (1 Mbps)
- Transmit power: 16 dBm typical
- Receive sensitivity: -82 dBm @ 11 Mbps
- Antenna connector: 1 x RP-SMA

Wireless Security:
- WEP (Wired Equivalent Privacy)
  - 64/128-bit encryption (RC4)
- WPA/WPA2/802.11i
  - 128-bit TKIP/CCMP encryption
  - 802.1x EAP authentication
    - LEAP (WEP only), PEAP, TTLS, TLS GTC, MD5, OTP, PAP, CHAP, MSCHAP, MSCHAPv2, TTLS-MSCHAPv2
  - Pre-Shared Key mode (PSK)

Dimensions (LxWxH):
- Digi Connect EM
  49.149mm x 40.005mm x 15.621mm
  1.935in x 1.575in x 0.803in
- Digi Connect Wi-EM
  49.149mm x 47.117mm x 19.939mm
  1.935in x 1.855in x 0.785in


Wi-ME Module

Embedded Modules

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each		
			1	10	50
860-DC-ME-01T-S	DC-ME-01T-S	ME Module w/8 MB SDRAM, 2MB Flash, Standard firmware	49.00	45.00	44.00
860-DC-ME-01T-C	DC-ME-01T-C	ME Module w/8MB SDRAM, 2MB Flash, Customizable	49.00	47.50	45.00
860-DC-ME4-01T-C	DC-ME4-01T-C	ME Module w/8MB SDRAM, 4MB Flash, Customizable	55.00	50.00	49.00
860-DC-WME-01T-S	DC-WME-01T-S	Wi-Me Module w/8MB SDRAM, 4MB Flash, Standard firmware	130.00	122.50	121.00
860-DC-WME-01T-C	DC-WME-01T-C	Wi-Me Module w/8MB SDRAM, 4MB Flash, Customizable	130.00	122.50	121.00

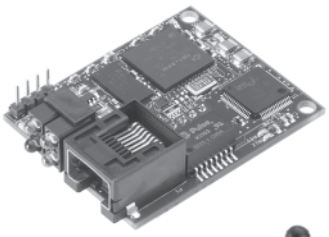
Development Kits and Tools

MOUSER STOCK NO.	Digi Part No.	Description	Price Each
860-DC-ME-01T-KT	DC-ME-01T-KT	ME Module Integration Kit (for use with "S" models)	249.00
860-DC-ME-01T-GN	DC-ME-01T-GN	ME Module Development Kit (for use with "C" models)	1495.00
860-DC-ME-01T-GN-NR	DC-ME-01T-GN-NR	ME Module Development Kit without Raven debugger (for use with "C" models)	895.00
860-DC-ME-01T-JT	DC-ME-01T-JT	ME Customizable module with JTAG interface (8MB SDRAM, 2MB Flash)	99.00
860-DC-ME4-01T-JT	DC-ME4-01T-JT	ME Customizable module with JTAG interface (8MB SDRAM, 4MB Flash)	99.00
860-FS-9060	FS-9060	ME Module Development Kit for LxNETES Linux	299.00
860-DC-WME-01T-KT	DC-WME-01T-KT	Wi-ME Integration Kit (for use with "S" models)	299.00
860-DC-WME-01T-GN	DC-WME-01T-GN	Wi-ME Module Development Kit (for use with "C" models)	1495.00
860-DC-WME-01T-GN-NR	DC-WME-01T-GN-NR	Wi-ME Module Development Kit without Raven debugger (for use with "C" models)	895.00
860-DC-WME-01T-JT	DC-WME-01T-JT	Wi-ME Customizable module with JTAG interface	249.00

DIGI CONNECT® EM FAMILY WIRED AND WIRELESS EMBEDDED MODULES

The Digi Connect® EM and the Digi Connect® Wi-EM are the industry's first interchangeable secure embedded modules, delivering wired and wireless Ethernet network connectivity that is cost-effective and easy to implement.

Based on a unique common platform design approach, the Digi Connect EM and Digi Connect Wi-EM embedded modules offer complete "drop-in" integration. This allows you to build future-proof products based on a single design supporting secure 10/100Base-T wired and 802.11b wireless Ethernet connectivity. Digi Connect EM embedded modules make all of this possible without the traditional complexities of hardware and software integration work, and at a fraction of the time and cost required to create custom solutions.


EM Module

Hardware:
- 32-bit NET+ARM high-performance RISC processor (NS7520 @ 55 MHz)
- On-board memory 4 MB Flash and 8 MB RAM
- On-board power supervisor
- Two high-speed TTL serial interfaces
  - Throughput up to 230 Kbps
  - Full signal support for TXD, RXD, RTS, CTS, DTR, DSR and DCD on port 1
  - TXD / RXD signals on port 2
  - Hardware/software flow control
- Serial Peripheral Interface (SPI)
- Nine shared General Purpose Input/Output (GPIO) ports
- Wave-solderable design (no clean flux process)

Network Interface:
Digi Connect EM:
- Standard: IEEE 802.3
- Physical Layer: 10/100Base-T
- Data rate: 10/100 Mbps (auto-sensing)
- Mode: Full or half duplex (auto-sensing)
- Connector: RJ-45

Digi Connect Wi-EM:
- Standard: IEEE 802.11b
- Frequency: 2.4 GHz
- Data rate: Up to 11 Mbps w/ auto talk back
- Modulation: CCK (11/5 Mbps), DQPSK (2 Mbps), DBPSK (1 Mbps)
- Transmit power: 16 dBm typical
- Receive sensitivity: -82 dBm @ 11 Mbps
- Antenna connector: 2 x RP-SMA

Wireless Security:
- WEP (Wired Equivalent Privacy)
  - 64/128-bit encryption (RC4)
- WPA/WPA2/802.11i
  - 128-bit TKIP/CCMP encryption
  - 802.1x EAP authentication
    - LEAP (WEP only), PEAP, TTLS, TLS
    - GTC, MD5, OTP, PAP, CHAP, MSCHAP, MSCHAPv2, TTLS-MSCHAPv2
  - Enterprise and Pre-Shared Key

Dimensions (LxWxH):
- Digi Connect ME
  36.7mm x 19.05mm x 18.67mm
  1.445in x 0.75in x 0.735in
- Digi Connect Wi-ME
  49.4mm x 19.05mm x 18.67mm
  1.945in x 0.75in x 0.735in


Wi-EM Module

Embedded Modules

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each		
			1	10	50
860-DC-EM-02T-S	DC-EM-02T-S	EM Module with 8MB SDRAM, 4MB Flash, Standard firmware	79.00	77.00	76.00
860-DC-EM-02T-C	DC-EM-02T-C	EM Module with 8MB SDRAM, 4MB Flash, Customizable	79.00	77.00	76.00
860-DC-WEM-02T-S	DC-WEM-02T-S	Wi-EM Module with 8MB SDRAM, 4MB Flash, Stand. firmware	140.00	135.00	130.00
860-DC-WEM-02T-C	DC-WEM-02T-C	Wi-EM Module with 8MB SDRAM, 4MB Flash, Customizable	140.00	135.00	130.00

Development Kits and Tools

MOUSER STOCK NO.	Digi Part No.	Description	Price Each
860-DC-EM-01T-KT	DC-EM-01T-KT	EM Integration Kit (for use with "S" models)	299.00
860-DC-EM-01T-GN	DC-EM-01T-GN	EM Module Development Kit (for use with "C" models)	1495.00
860-DC-EM-01T-GN-NR	DC-EM-01T-GN-NR	EM Module Development Kit without Raven debugger (for use with "C" models)	895.00
860-DC-EM-01T-JT-DB	DC-EM-01T-JT-DB	EM Module Development Board with customizable JTAG ME module	299.00
860-DC-EM-01T-JT	DC-EM-01T-JT	EM Customizable module with JTAG interface	249.00
860-DC-WEM-01T-KT	DC-WEM-01T-KT	Wi-EM Integration Kit (for use with "S" models)	299.00
860-DC-WEM-01T-GN	DC-WEM-01T-GN	Wi-EM Module Development Kit (for use with "C" models)	1495.00
860-DC-WEM-01T-GN-NR	DC-WEM-01T-GN-NR	Wi-EM Module Development Kit without Raven debugger (for use with "C" models)	895.00
860-DC-WEM-01T-JT-DB	DC-WEM-01T-JT-DB	Wi-EM Module Development Board with customizable JTAG Wi-ME module	299.00
860-DC-WEM-01T-JT	DC-WEM-01T-JT	Wi-EM Customizable module with JTAG interface	249.00

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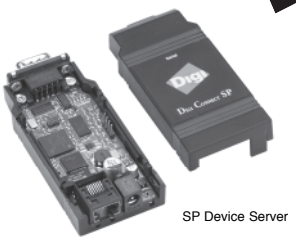
DIGI CONNECT® SP FAMILY WIRED AND WIRELESS DEVICE SERVERS

The Digi Connect SP device server delivers a powerful, compact and cost-effective off-the-shelf hardware platform for embedded networking solutions.

Built on leading NetSilicon 32-bit NET+ARM technology, the Digi Connect SP device server provides a powerful off-the-shelf hardware platform for embedded web and network applications with a seamless migration path to embedded modules and a fully integrated NetSilicon system-on-chip solution using the award-winning family of Ethernet-enabled NET+ARM microprocessors.


SP Device Server

Features:
- 32-bit NET+ARM high-performance RISC processor (NS7520 55 MHz)
- 4 MB Flash and 16 MB RAM integrated
- Switch-selectable RS-232/422/485 interface (DB-9M)
  - Throughput up to 230,400 bps
  - 7, 8 data bits
  - 1, 1.5, 2 stop bits
  - Mark/space/even/odd parity
  - Full signal support with software/hardware flow control
- Auto-sensing 10/100 Mbit Ethernet interface and network link

Environmental:
- Operating Temp: -0ºC to +60ºC
- Relative Humidity: 5% to 90% (non-condensing)

Wi-SP Wireless Security:
- WEP (Wired Equivalent Privacy)
  - 64/128-bit encryption (RC4)
- WPA/WPA2/802.11i
  - 128-bit TKIP/CCMP encryption
  - 802.1X EAP authentication

Wi-SP Wireless Interface:
- Standard: IEEE 802.11b
- Frequency: 2.4 GHz
- Data rate: Up to 11 Mbps with automatic fallback
- Modulation: CCK (11/5 Mbps), DQPSK (2 Mbps), DBPSK (1 Mbps)
- Transmit power: 16 dBm typical
- Receive sensitivity: -82 dBm @ 11 Mbps
- Antenna connector: 1 x RP-SMA

Dimensions:
- Length: 4.188 in (10.64 cm)
- Width: 1.680 in (4.267 cm)
- Depth: 0.999 in (2.537cm)

Development Kit Contents:
- Digi Connect SP or Wi-SP w/JTAG
- Macgraigor Raven JTAG debugger
- NET+Works software components
- SMICng MIB compiler
- Micro XML SAX parser
- Additional utilities
  - HTML-to-C compiler
  - Flash download
- Sample code
- Documentation
- Cables
- Loop-back adapter
- Power supplies


Wi-SP Device Server

Device Servers

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each 1	Price Each 10
860-DC-SP-01-C	DC-SP-01-C	Digi Connect SP Device Server Adapter	189.00	185.00

Development Kits and Tools

MOUSER STOCK NO.	Digi Part No.	Description	Price Each
860-DC-SP-01-GN	DC-SP-01-GN	Digi Connect SP Adapter Development Kit	1495.00
860-DC-SP-01-GN-NR	DC-SP-01-GN-NR	Digi Connect SP Adapter Development Kit (No Raven Debugger)	895.00
860-DC-SP-01-JT	DC-SP-01-JT	Digi Connect SP Adapter Customizable model with JTAG interface	249.00

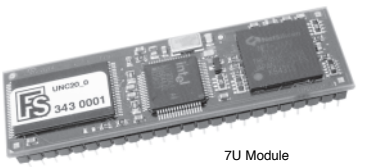
CONNECTCORE™ 7U POWERFUL ARM7 CORE MODULE

Universal 32-bit NET+ARM embedded core processor module offers a wide range of component connectivity options and superior software design flexibility through complete development platform support options.

Built on leading NetSilicon 32-bit NET+ARM technology, the ConnectCore 7U is a powerful and universal embedded module in a compact 48-pin Dual In-line Package (DIP) form factor. It provides the ideal core processor platform for product designs demanding an additional level of performance, connectivity and development platform flexibility.

Complete and royalty-free LxNETES Linux and NET+OS development kits with development board, documentation, hardware debugging options, cables and accessories are available for evaluation/development use.

In addition, ready-to-run application-focused development kits for Java based development, serial LCD integration, CAN bus communication, Bluetooth connectivity, CompactFlash/WLAN support, and biometric fingerprint reading are also available. These kits provide all required hardware/software components and are specifically designed to reduce overall development cost and time-to-market of your products



7U Module

Hardware:
- 32-bit NET+ARM high-performance RISC processor NS7520 @ 55 MHz
- 2/8 MB Flash and 16 MB RAM onboard
- Integrated 10/100 Mbps Ethernet MAC/PHY
- Two serial interfaces
  - UART mode w/data rates up to 230 Kbps
  - SPI mode (Master only)
- 8 KB serial EEPROM for configuration storage
- Standard mode I2C software bus interface (100 kHz)
- External memory bus interface
  - 10 address bits
  - 8 data bits
  - 2 external chip selects
- Two independent 27-bit timers (IRQ/FIQ, 2microseconds to 20 hours)
- On-board JTAG interface

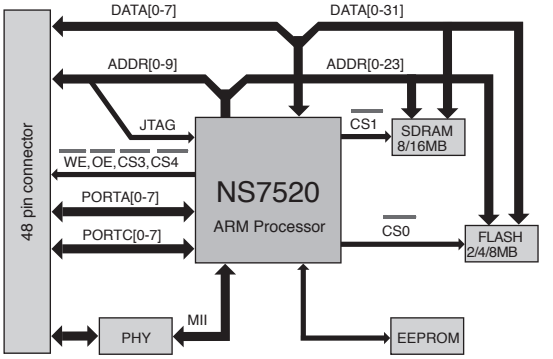
Ethernet Interface:
- Standard: IEEE 802.3
- Physical layer: 10/100Base-T
- Data rate: 10/100 Mbps (auto-sensing)
- Mode: Full or half duplex (auto-sensing)

Power Requirements:
- 3.3VDC @ 280 mA (max)

Features:
- Core processor module in compact 48-pin DIP form factor
- Powerful 32-bit NET+ARM processor
- 16 MB RAM and up to 8 MB Flash
- Integrated 10/100 Ethernet MAC/PHY
- Up to 2 high-speed serial ports – UART and SPI (Master) configurations
- Standard mode I2C software interface
- 16 shared GPIO port options
- External memory bus interface
- Software design flexibility through royalty-free development platforms – NET+OS® and LxNETES™ Linux
- Optional VxWorks® support package
- Application-specific development kits – Java®, CAN, Bluetooth®, Biometrics, CompactFlash®/Wireless LAN, LCD

Environmental:
- Operating temperature: 0° C to +70° C (+32° F to +158° F)
- Relative humidity: 5% to 90% (non-condensing)

Dimensions:
- Length: 2.475 in (6.287 cm)
- Width: 0.728 in (1.850 cm)
- Height: 0.409 in (1.040 cm)



Block Diagram

Embedded Modules

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each 1	Price Each 10
860-FS-355	FS-355	ConnectCore 7U Module with 16MB SDRAM, 2MB Flash	99.00	95.00
860-FS-353	FS-353	ConnectCore 7U Module with 16MB SDRAM, 8MB Flash, Fingerprint license	159.00	150.00
860-FS-352	FS-352	ConnectCore 7U Module with 16MB SDRAM, 8MB Flash	135.00	129.60
860-FS-373	FS-373	FS Forth UNC90 Module with 32MB SDRAM, 16MB Flash (Atmel AT91RM9200 MCU @ 180MHz)	159.00	159.00

Development Kits and Tools

MOUSER STOCK NO.	Digi Part No.	Description	Price Each
860-FS-997	FS-997	Digi ConnectCore 7U Module Development Kit for LxNETES Linux	299.00
860-FS-998	FS-998	Digi ConnectCore 7U Module Development Kit for NET+OS	1495.00
860-FS-9007	FS-9007	Digi ConnectCore 7U Module Biometric Design Kit - IKENDI Fingerprint	895.00
860-FS-9021	FS-9021	Digi ConnectCore 7U Module Compact Flash Design Kit with 802.1b wireless	895.00
860-FS-9022	FS-9022	Digi ConnectCore 7U Module Java Design Kit - Java (Mika)	895.00
860-FS-985	FS-985	JTAG SuperBooster for programming flash memories with Software - 3 Volt	795.00

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CONNECTCORE™ 9C POWERFUL ARM9 CORE MODULE

Highly-integrated, compact DIMM form factor module based on the 155 MHz NS9360 ARM9 processor provides core processing functionality with integrated network connectivity.

Built on leading NetSilicon 32-bit NET+ARM technology, the ConnectCore 9C module also provides a seamless migration path to a fully integrated system-on-chip solution. Based on the easy-to-use and entirely royalty-free NetSilicon NET+Works® development platform, the ConnectCore 9C delivers a complete out-of-the-box solution for embedded software development. It provides all the integrated building blocks needed to quickly and cost-effectively create secure and fully network-enabled product solutions. This minimizes design risk and significantly accelerates the overall embedded software development process.

Hardware:
- 32-bit NS9360 high-performance RISC processor (155 MHz) w/MMU
- Board memory - 4 MB Flash /16 MB RAM
- Up to 4 high-speed TTL serial ports
- Up to 4 SPI ports
- I2C v1.0 bus interface
- USB 2.0 Host/Device Interface
- LCD controller
- General Purpose Timers/Counters/PWM
- 4 programmable external interrupts
- Up to 55 shared General Purpose
- Real-time clock

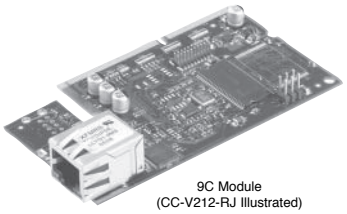
Dimensions:
- Length: 3.50 in (88.90 mm)
- Width: 2.10 in (53.34 mm)
- Height: 0.80 in (20.32 mm)

Network Interface:
- Standard: IEEE 802.3
- Physical Layer: 10/100Base-T
- Data rate: 10/100 Mbps
- Mode: Full or half duplex
- On-board connector: RJ-45 w/magnetics
- 802.3af power pass-through

Environmental:
- Operating temperature: -40° C to +85° C (-40° F to +185° F)
- Relative humidity: 5% to 95% (non-condensing)

Power Requirements:
- Module: 3.3VDC @ 450 mA max
- USB interface: 5VDC @ 500 mA max per port (optional)

Development Kit Contents:
- ConnectCore 9C module
- Development board
- Macgraigor Raven JTAG debugger or gdb software debugger
- Microcross™ GNU X-Tools
- Sample code
- Driver source code
- ThreadX Real-Time Operating System
- Fusion™ TCP/IP stack with full networking protocol
- Universal IP address assignment
- Network discovery services - ADDP, LDAPv3
- Allegro Software Embedded Web Server
- SSL 3.0/TLS 1.0 with strong encryption
- Flexible & robust file system supporting RAM & Flash
- SMICng SNMP MIB compiler
- Micro XML SAX parser
- Utilities - HTML-to-C compiler, Flash download



9C Module
(CC-V212-RJ Illustrated)

Embedded Modules

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each 1	Price Each 10
860-CC-V212-RJ	CC-V212-RJ	ConnectCore 9C Module w/16MB SDRAM, 4MB Flash, Ethernet connector	160.00	156.80
860-CC-V212	CC-V212	ConnectCore 9C Module w/16MB SDRAM, 4MB Flash, Ethernet, Dual Stacked USB connectors	175.00	171.00

Development Kits and Tools

860-CC-9C-GN	CC-9C-GN	ConnectCore 9C Module Development Kit for NET+OS with Raven hardware debugger	2495.00
860-CC-9C-GN-NR	CC-9C-GN-NR	ConnectCore 9C Module Development Kit for NET+OS with software debugger	1895.00

CONNECTCORE™ 9P POWERFUL ARM9 CORE MODULE

Compact high-performance 32-bit NET+ARM processor module family combines superior performance and design integration flexibility with complete embedded software platform support.

Built on leading NetSilicon® 32-bit NET+ARM technology, the network-enabled ConnectCore 9P family provides a modular and scalable core processor solution that significantly minimizes software and hardware design risk and dramatically improves the time-to-market aspects of your product development process.

Complete and royalty-free development kits supporting the NET+OS, LxNETES Linux, and Microsoft Windows CE environments are available for platform evaluation and product development use. All development kits include a development board, hardware debugging options, board support packages, sample code, documentation, cables, and related accessories.

Hardware:
ConnectCore 9P 9750
- 32-bit NET+ARM (ARM926EJ-S) high-performance RISC processor NS9750 @ 200 MHz
- Up to 128 MB NAND Flash and 64 MB SDRAM
- Integrated 32-bit PCI v2.2/Cardbus Bridge (33 MHz)
- 16 General Purpose Timers/Counters
- Up to 50 GPIO port options

ConnectCore 9P 9360
- 32-bit NET+ARM (ARM926EJ-S) high-performance RISC processor NS9360 @ 177 MHz
- Up to 128 MB NAND Flash and 128 MB SDRAM
- 8 General Purpose Timers/Counters or 4 PWM funct.
- Up to 73 GPIO port options

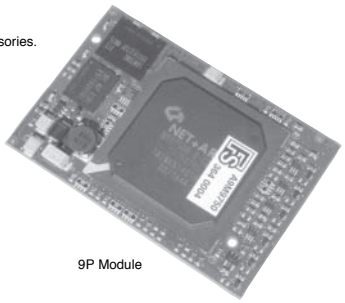
ConnectCore 9P Features:
- 240-pin core processor module in compact 60 x 44 mm form factor
- Integrated 10/100 Mbps Ethernet MAC/PHY
- Up to four serial interfaces w/UART and SPI mode
- Integrated USB 2.0 compliant host/device interface
- On-chip I2C bus interface (100/400 kHz)
- Flexible LCD controller with support for TFT/STN displays
- External memory bus interface
  - 32-bit data bus and 28-bit address bus
- Real-Time Clock (RTC) with external battery backup
- 8 KB serial EEPROM for configuration storage
- On-board JTAG interface
- USB host and device mode support
- Fast-mode I2C hardware interface

Ethernet Interface:
- Standard: IEEE 802.3
- Physical layer: 10/100Base-T
- Data rate: 10/100 Mbps
- Mode: Full or half duplex

Dimensions:
- Length: 2.362 in (6.0 cm)
- Width: 1.732 in (4.4 cm)
- Height: 0.395 in (1.0 cm)

Environmental:
- Operating temperature: 0°C to +70°C (+32°F to +158°F)
- Relative humidity: 5% to 90% (non-condensing)

Power Requirements:
- **9750** - 3.3VDC @ 600 mA (max)
- **9360** - 3.3VDC @ 400 mA (max)



9P Module

Embedded Modules

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each 1	Price Each 10
860-FS-380	FS-380	ConnectCore 9P (9750) Module with NS9750, 64MB SDRAM, 32 MB Flash	320.00	315.00
860-FS-383	FS-383	ConnectCore 9P (9360) Module with NS9360, 64 MB SDRAM, 64 MB Flash	229.00	219.00

Development Kits and Tools

860-FS-9064	FS-9064	ConnectCore 9P Module (9360) Development Kit for LxNETES - Linux	2495.00
860-FS-9053	FS-9053	ConnectCore 9P Module (9750) Development Kit for LxNETES - Linux	2495.00
860-FS-9032	FS-9032	ConnectCore 9P Module (9750) Development Kit for NET+OS	2495.00
860-FS-985	FS-985	FS Forth JTAG SuperBooster for programming flash memories with Software - 3 Volt	795.00

DIGI/ FS FORTH A9M2410/ A9M2440 EMBEDDED CORE MODULES

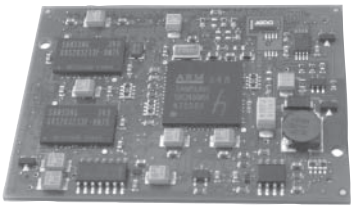
These high performance, Samsung processor based, modules are members of FS Forth-System's ModARM9 family of modular solutions for embedded systems. These modules includes SDRAM, Flash and control logic in a compact 60x44mm form factor. Low power consumption allows for battery-powered applications. Other typical applications include those in Industrial Automation, Retail Point-Of-Sale, Medical Instrumentation, Data Acquisition.

A9M2410:
- Samsung's S3C2410 microcontroller
- ARM920T core (200MHz) with MMU

A9M2440:
- Samsung's S3C2440 microcontroller
- ARM920T core (400MHz) with MMU

Features:
- LCD controller (STN & TFT)
- Touch screen interface
- USB 1.1 Host and Device controller
- 32/64/128 MBytes NAND Flash
- 16/32/64/128 MBytes SDRAM
- 3 UART channels
- I2C interface SPI interface
- Serial EEPROM for storing configuration parameters
- RTC
- Single 3.3V power supply
- Optional 10Mbps Ethernet controller CS8900A
- Size 60mm x 44mm with 240-pin connector

A9M2410 Module



Embedded Modules

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each 1	Price Each 10
860-FS-365	FS-365	FS Forth A9M2410 Module with 32MB SDRAM, 32MB Flash No Ethernet	195.00	192.00
860-FS-362	FS-362	FS Forth A9M2410 Module with 32MB SDRAM, 32MB Flash with 10 Mbps Ethernet	215.00	211.00
860-FS-662	FS-662	FS Forth A9M2440 Module with 32MB SDRAM 32MB Flash, with 10Mbps Ethernet	209.00	209.00

Development Kits and Tools

860-FS-9035	FS-9035	FS Forth A9M2410 Module Development Kit for LxNETES - Linux	2495.00
860-FS-9071	FS-9071	FS Forth A9M2440 Development Kit LxNETES - Linux	2495.00
860-FS-985	FS-985	FS Forth JTAG SuperBooster for programming flash memories with Software - 3 Volt	795.00

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DIGI INTERNATIONAL Embedded Modules & Development Tools

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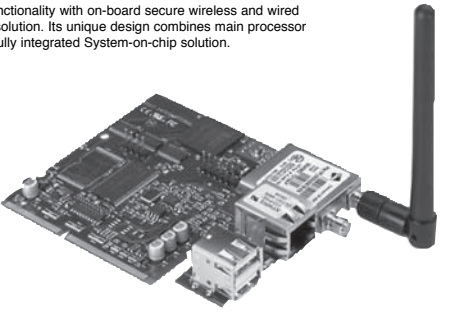
Check mouser.com for RoHS status.

DIGI CONNECTCORE™ WI-9C, 32-BIT 155 MHZ ARM 9 CORE MODULE

Highly integrated, compact SO-DIMM form factor core module based on the powerful NetSilicon® NS9360 processor combines main processing functionality with on-board secure wireless and wired network connectivity. Built on leading 32-bit NET+ARM technology, the ConnectCore Wi-9C module is a powerful network-enabled core processor solution. Its unique design combines main processor performance, secure wireless/wired network connectivity, embedded software and hardware design flexibility, and a seamless migration path to a fully integrated System-on-chip solution.



Features:
- Compact SO-DIMM Core Module
- Powerful 32-bit NS9360 w/ARM926EJ-S core
- Up to 256 Mbyte SDRAM/Flash
- 802.11b/g or 802.11a/b/g with strong WPA2/802.11i security
- 10/100 Mbit Ethernet interface
- I/O connectivity options: USB, UART, I2C, SPI, PWM, GPIO
- On-chip LCD controller
- Industrial operating temperature
- Pre-certified radio reduces cost, design risk and time to market
- FCC Class B compliant low emissions design
- Population options for unique design flexibility
- Complete embedded software platform offering with support and design services: ThreadX® , Microsoft® Windows® CE, Linux

Hardware:
- 32-bit NS9360 high-performance RISC processor @ 155 MHz
- Up to 256 MB Flash and 256 MB SDRAM
- Up to 4 Serial and SPI ports
- I2C v1.0 bus interface
- USB 2.0 host/device full speed interface
- On-chip LCD controller for TFT / STN LCD
- Up to 8 programmable timers/counters
- Up to 4 PWM functions
- Four programmable external interrupts
- Up to 55 shared General Purpose Input/Output (GPIO) ports
- Real-time clock

Environmental:
- Storage temperature: -50° C to 125° C (-58° F to 257° F)
- Operating temperature: -40° C to 85° C (-40° F to 185° F)
- Relative humidity: 5% to 90% (non-condensing)
- Altitude: 12,000 feet (3,658 meters)
- 3.3VDC @ 800 mA max

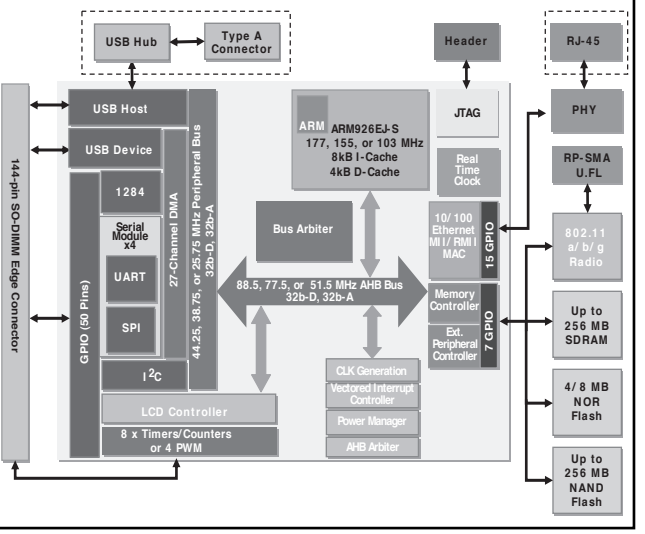
Network Interface:
Wired
- Standard: IEEE 802.3
- Physical layer: 10/100Base-T
- Data rate: 10/100 Mbps (auto-sensing)
- Mode: Full or half duplex (auto-sensing)
- Connector: RJ-45 w/magnetics (optional)

Wireless
- Standard: IEEE 802.11b/g
  - Frequency: 2.4 GHz -Data rate: Up to 54 Mbps w/fallback
  -Modulation: DBPSK (1 Mbps), DQPSK (2 Mbps), CCK (11,5.5 Mbps), BPSK (6,9 Mbps), QPSK (12,18 Mbps), 16-QAM (24, 36 Mbps), 64-QAM (48, 54 Mbps)
  -Transmit power: 16 dBm typical
  -Receive sensitivity: -73 dBm @54Mbps
- Standard: IEEE 802.11a
  -Frequency: 5 GHz
  -Data rate: Up to 54 Mbps w/fallback
  -Modulation: BPSK (6,9 Mbps), QPSK (12, 18 Mbps), 16 QAM (24, 36 Mbps), 64-QAM (48, 54 Mbps)
  -Transmit power: 16 dBm typical
  -Receive sensitivity: -66 dBm @ 54 Mbps
- Connector: 1/2 x RP-SMA or 2 x U.FL

Wireless Security:
WEP (Wired Equivalent Privacy)
- 64/128-bit encryption (RC4) WPA/WPA2/802.11i
- 128-bit TKIP/CCMP(AES) encryption
- 802.1x EAP authentication
  - LEAP (WEP only), PEAP, TTLS, TLS
  -GTC, MD5, OTP, PAP, CHAP, MSCHAP, MSCHAPv2, TTLS-MSCHAPv2
  -Pre-shared key mode (PSK)

Dimensions:
- Length: 3.06 in (7.76 cm)
- Width: 3.59 in (9.12 cm)
- Height: 0.80 in (2.03 cm)

Block Diagram

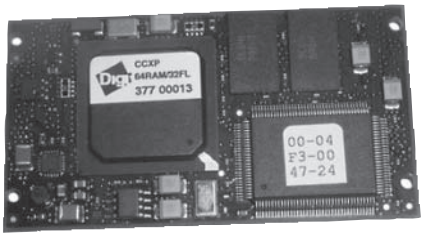


For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each	
			1	10
860-CC-W9C-GN	CC-W9C-GN	ConnectCore Wi-9C NET+Works GNU Development Kit	2495.00	Call
860-CC-WI-9C	CC-WI-9C	ConnectCore Wi-9C Module	638.00	638.00

DIGI CONNECTCORE™ XP, 32-BIT 520 MHZ INTEL XSCALE CORE MODULE

High-performance core module with Intel XScale processor provides complete embedded platform support, combining industry-leading performance, multimedia capabilities and low power requirements in an ulta-compact form factor. The ConnectCore XP module introduces high-performance Intel XScale technology to the ConnectCore™ family of network-enabled embedded core processor modules. It provides the core processor platform solution of choice for applications demanding the combination of scalable Intel PXA270 performance at speeds up to 520 MHz, on-chip video and audio capabilities, low power requirements, integrated network connectivity, and complete embedded software platform flexibility. The ConnectCore XP offers a complete system on a module in an ultra-compact form factor with processor, on-board memory, integrated 10/100 Mbit network interface, LCD controller (VGA/SVGA), AC'97 and I2S audio codec interfaces, plus a complete set of peripheral connectivity options such as SSP/NSSP, I2C, UARTs, and IrDA. The external 32-bit address/ data bus interface provides additional flexibility and almost unlimited design freedom.



Features:
- Intel PXA270 processor with Intel XScale microarchitecture core
- 64 MB SDRAM and 32 MB Intel StrataFlash®
- Wide variety of I/O connectivity options
- Strong multimedia capabilities w/LCD controller and audio interfaces
- Comprehensive USB 1.1 host/device interface support, plus USB 2.0 OTG
- Memory/expansion card interfaces
- External 32-bit memory bus interface
- Low-power requirements
- Complete embedded software platform offering w/support and design services -Microsoft Windows CE and Linux

Ethernet Interface:
- Standard: IEEE 802.3
- Physical layer: 10/100Base-T
- Data rate: 10/100 Mbps (auto-sensing)
- Mode: Full or half duplex (auto-sensing)

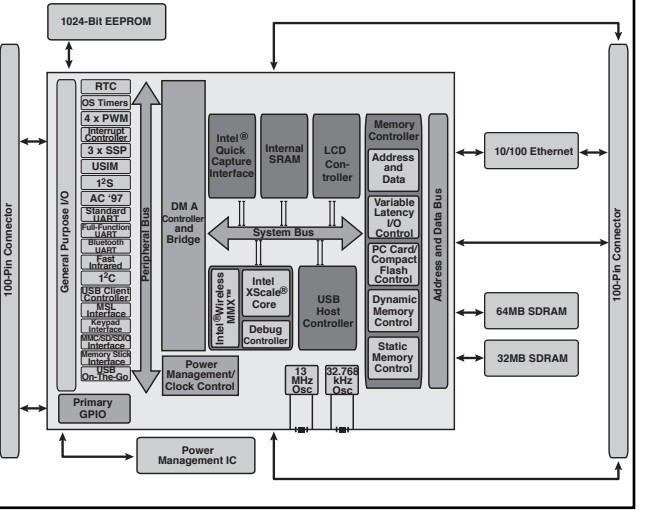
Environmental:
- Storage temperature: -50° C to +125° C (-58° F to +257° F)
- Operating temperature: 0° C to 70° C (32° F to 158° F)
- Relative humidity: 5% to 90% (non-condensing)

Power Requirements:
- 3.3VDC @ 190/350 mA (min/max)

Hardware:
- 32-bit Intel XScale PXA270 high-performance RISC processor @ 520 MHz
- 32 MB Intel StrataFlash and 64 MB SDRAM on-board
- 1024-bit 1-Wire® EEPROM
- Integrated 10/100 Mbps Ethernet MAC/PHY
- On-chip LCD controller for TFT/STN LCD panels – Up to SVGA (800x600) resolution w/up to 24 bpp color depth
- On-board USB 1.1 host/device and USB 2.0 OTG interface – Full speed (12 Mbps) and low speed (1.5 Mbps) modes
- 2 SSP/NSSP ports – Synchronous Serial Protocol (SSP), Serial Peripheral Interface (SPI), Microwire, Programmable Serial Protocol (PSP) modes
- 1 full-function UART w/maximum data rate of 921kbps – TX, RX, RTS, CTS, DTR, DSR, DCD, RI
- 1 Bluetooth UART w/maximum data rate of 921kbps – TX, RX, RTS, CTS
- Fast Infrared Communications Port (FICP) – Up to 4 Mbps half-duplex operation
- 1 I2C bus interface w/fast mode (400 KHz) support
- I2S interface and AC'97 audio controller
- 2 Pulse Width Modulator (PWM) signals
- Memory and expansion card interfaces – PCMCIA/CompactFlash®, SD/SDIO, MMC, and Memory Stick
- 32-bit external memory bus interface
- Up to 75 GPIO port options
- On-board JTAG interface

Dimensions:
- Length: 2.661 in (6.760 cm)
- Width: 1.444 in (3.670 cm)
- Height: 0.192 in (0.490 cm)

Block Diagram



For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each	
			1	10
860-FS-9077	FS-9077	LxNETES 3.2 Development Kit	2495.00	Call
860-FS-377	FS-377	ConnectCore XP 270 (520 MHz, 32/64)	295.00	295.00

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DIGI INTERNATIONAL External Device Servers

Products may be RoHS compliant.
Check mouser.com for RoHS status.

DIGI ONE® SP

Efficient RS-232/422/485 serial-to-Ethernet connectivity for applications requiring simple and cost-effective data communications.
- Cost-effective serial-to-Ethernet connectivity
- 1 RS-232/422/485 switch selectable DB-9 serial port
- Compact form factor – only 3.7 in (9.4 cm) in length

The Digi One SP device server easily allows any device with a serial port to be connected to Ethernet. The compact design of the Digi One SP delivers cost-effective performance and capability in one of the smallest form factors available. The Digi One SP delivers efficient serial-to-Ethernet connectivity and is ideal for applications where TCP Socket, UDP Socket, or UDP multicast functionality is needed.

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each
860-70001851	70001851	Digi One SP	182.00
860-70001999	70001999	Digi One SP IA with Din Rail Kit	227.00

DIGI CONNECT® WI-SP

The industry's first secure 802.11b wireless device server delivers leading network-to-serial connectivity and strong WPA2/802.11i security.
- Compact design with integrated mounting tabs
- Switch selectable RS-232/422/485 interface
- Enterprise-class WPA2/802.11i wireless security
- Product integration and customization flexibility

The Digi Connect Wi-SP is the industry's first wireless device server providing enterprise-class wireless security through a complete set of strong encryption and authentication services, which are compliant with the WPA2 and 802.11i standards.

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each
860-DC-WSP-01-S	DC-WSP-01-S	Digi Connect Wi-SP	378.00

DIGI PORTSERVER® TS

Standard multiport RS-232/422/485 serial-to-Ethernet connectivity that is ideal for applications requiring low port count and seamless integration into existing application.
- Standard, reliable serial-to-Ethernet connectivity
- 1/2/4 ports; RS-232 RJ-45 serial
- 9-30VDC power supply
- Easy configuration using installation CD

PortServer TS delivers standard serial-to-Ethernet connectivity simply and reliably. It easily addresses the growing need to connect individual devices to the network over industry standard Ethernet in many applications. PortServer TS is ideal for applications requiring COM ports or where TCP/UDP Sockets, or UDP multicast functionality is required. It includes Digi's patented RealPort® COM port redirector technology which makes it possible to establish a connection between the host and networked serial device by creating a local COM or TTY port on the host computer, allowing existing software applications to work without modification.

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each
860-70002041	70002041	Digi PortServer TS 1 (1 PORT)	303.00

DIGI PORTSERVER® TS MEI

Universal, high-performance device servers for RS-232/422/485 serial-to-Ethernet connectivity. Advanced features include SSH v2, SNMP, PPP, port buffering and many more.
- Standard, reliable serial-to-Ethernet connectivity
- 1/2/4 serial port models available
- Switch selectable RS-232/422/485 RJ-45 serial

PortServer TS MEI (Multi-Electrical Interface, RS-232/422/485) makes it easy to connect any serial device to your network. Available in 1, 2 and 4 port models, it combines the inherent benefits of data networking with proven asynchronous connectivity to deliver powerful, yet simple Ethernet connectivity for all your serial devices.
PortServer TS MEI delivers universal and powerful features including data security via SSH v2, port buffering, and full SNMP management, making it ideal for applications like console management where device management and monitoring are critical.

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each
860-70001805	70001805	Digi PortServer TS 1 MEI (1 PORT)	364.00

DIGI PORTSERVER® TS W MEI

Universal, high-performance RS-232/422/485 serial-to-wireless connectivity. Advanced features include WEP (64- and 128-bit), SSH, easy management and many more.
- Easily connect serial devices to an 802.11b wireless Ethernet network
- Switch selectable RS-232/422/485 serial RJ-45
- WEP encryption (64-/128-bit)
- 1/2/4 port models available

The PortServer TS W MEI family of device servers makes it easy to network-enable serial devices to a wireless 802.11b infrastructure. Users will appreciate the new external antenna and hidden wireless card offered by the versatile one-, two-, and four-port solutions.
PortServer TS W MEI also delivers easy installation through an auto-run wizard on the CD for Microsoft® and UNIX® platforms, RS-232/422/485 serial ports for connectivity to almost any serial interface, and many advanced networking features.

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each
860-70001954	70001954	Digi PortServer TS 1 W MEI (1 PORT)	721.00

DIGI PORTSERVER® TS M MEI MODEM

Device server with internal modem provides both IP networking and standard phone line dial-up connectivity for remote access to RS-232/422/485 serial devices.
- Device server with internal modem
- Modem connection can act as backup during network failure
- Access remote devices and IP networks via internal modem

The new PortServer TS M MEI family offers Ethernet and RS-232/422/485 serial connections, with the addition of an internal modem. The one- and three-port device servers are ideal for applications requiring both IP networking and standard phone line dial-up connectivity for remote access to serial devices.
The embedded modem adds another level of flexibility to the PortServer TS line. It allows remote hosts to dial in to a serial device attached to a device server, as well as the serial device to dial out to a remote location using a standard phone line. The modem helps to create a PPP connection so that applications and devices can communicate via an IP network, even when the primary LAN or WAN is not available.

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each
860-70001898	70001898	Digi PortServer TS 1 M MEI (1 PORT)	607.00

DIGI PORTSERVER® TS H MEI

Hardened solution delivers high-performance RS-232/422/485 serial-to-Ethernet connectivity. Designed specifically for traffic management, pipelines or any application requiring extended operating ambient temperatures of -35° C to +70° C.
- Extended temperature tolerance
- Locking power connector
- 1/2/4 port models available
- Switch-selectable RS-232/422/485 RJ-45 serial

The PortServer TS H MEI family of device servers is designed specifically for utility plants, pipelines, traffic management facilities or any remote application requiring a hardened serial-to-Ethernet solution that can withstand extreme temperatures. Available in 1/2/4-port versions, PortServer TS H MEI makes it easy to network-enable and remotely manage variable message signs, loop detectors, ramp meters or any RS-232/422/485 serial device.

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each
860-70001917	70001917	Digi One TS H 1 (1 PORT)	455.00

DIGI PORTSERVER® TS P MEI

Designed for universal, high-performance RS-232/422/485 serial-to-Ethernet where traditional power alternatives such as powered Ethernet and powered serial are required.
- Supports powered Ethernet and powered serial
- One, two or four RS-232/422/485 ports

The PortServer TS P MEI family makes it easy to connect RS-232/422/485 serial devices to an IP network. By supporting versatile powering options like powered Ethernet and powered serial, PortServer TS P MEI can adapt to many applications where traditional power alternatives are required. PortServer TS P MEI delivers universal, high performance multiport serial-to-Ethernet connectivity. It is ideal for applications requiring COM ports, serial tunneling, or where TCP/UDP Socket functionality is needed.

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each
860-70001988	70001988	Digi PortServer TS 1 P MEI (1 PORT)	455.00

DIGI ONE® IA

The Digi One IA device server delivers easy and reliable serial-to-Ethernet and Modbus-to-Modbus/TCP connectivity solutions for industrial automation applications
- Switch selectable RS-232/422/485 for use with virtually any device with a serial port
- Extended input voltage of 9-30VDC with screw terminal connections
- 32º F to 140º F (0º C to 60º C) operating temperature to meet the demands of the factory floor
- An industrial strength, ergonomic enclosure designed to mount vertically on a standard 35 mm DIN rail, saving valuable cabinet space
- Industry-leading low latency to meet the strict data throughput requirements for CNC/DNC equipment and other applications

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each
860-70001862	70001862	Digi One IA	364.00
860-70001876	70001876	Digi One IA Modem, RS232 only w/ V.92 56Kmodem	273.00

DIGI EASYPOWER™

The Digi EasyPower family provides simple, safe and efficient device power over existing LAN data cabling (Ethernet). It is ideal for applications where power outlets are not available at the optimal device location.
- Provides simple, safe and efficient device power over Ethernet
- 1/6 power and data ports
- IEEE 802.3af compliant

The Digi EasyPower provides one or six data/Ethernet ports for connecting powered Ethernet devices to the corporate hub/switch. The Digi EasyPower has two ports for each device. One port provides power and can transmit/receive data to the powered Ethernet device. The second port connects to the corporate hub/switch for Ethernet connectivity.
The Digi EasyPower makes powering device servers easy and cost-effective. There is no need to provide separate power supplies for the Digi One® IAP, PortServer® TS P MEI family and Digi Connect® 50. The Digi EasyPower is fully compatible with the IEEE 802.3af standard.

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Digi Part No.	Description	Price Each
860-76000660	76000660	EasyPower Powered Ethernet Hub	227.00

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USB Interface Products

Products may be RoHS compliant.
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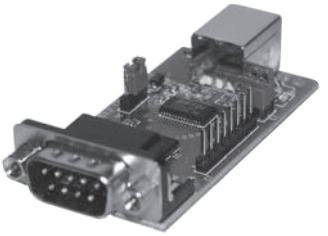
FTDI EVAL232R SERIAL TO USB EVALUATION MODULE

The EVAL232R is a USB to RS232 development and evaluation module for the FT232RL IC device. Additional header pins on the board provide access to the FT232RL device's configurable CBUS interface pins. Powered from USB, the EVAL232R supports both 5V and 3V level IO interface voltage on the CBUS via a jumper setting. Full RTS/CTS and DTR/DSR hardware handshaking are supported. DCD and RI are also available. Data transfer rates from 300 baud to 1 mega baud at RS232 levels. LEDs are fitted to indicate activity on the FT232RL's TXD and RXD lines, thus showing when the module is transmitting or receiving data.



MOUSER STOCK NO.	FTDI Part No.	Description	Price Each
626-DLP-EVAL232R	EVAL232R	FTDI Evaluation Module for FT232RL	21.00

FTDI UC232R "CHIPI" USB TO RS232 CABLE

The UC232R "ChiPi" USB to RS232 converter is an evaluation cable for the FT232R. It utilizes the minimum number of components required for a basic USB - RS232 converter designed using the FT232RL. Using the FT232R with an RS232 level converter and a few capacitors, the ChiPi is a CE and FCC approved module that is one of the simplest USB - RS232 solutions around. Using a standard DB9 connector and powered from the USB port, the ChiPi can be used with the VCP drivers to provide a COM port on a PC which is capable of communicating with RS232 devices at up to 250kBaud.

- UC232R converter cable provides USB to RS232 (DB9) interface.
- FCC and CE Class B approval
- Connect to a PC via standard USB 'A' plug on 30cm USB cable.
- Full design files available from FTDI website.

RoHS Compliant

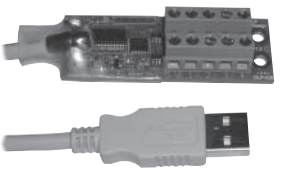
MOUSER STOCK NO.	FTDI Part No.	Description	Price Each
626-DLP-UC232R	UC232R	FTDI USB to RS232 Cable	20.00

DLP-IO8 USB BASED 8-CHANNEL DATA ACQUISITION MODULE

NEW FROM SUPPLIER

The DLP-IO8 Data Acquisition Module is a low-cost, easy-to-use data acquisition system for measuring voltages, controlling and monitoring processes, and acquiring temperature data. Each of the 8 available channels can be configured for any ot the digital, analog, or temperature modes via single-byte commands. All operational power is taken from the host PC via the USB port.

Features:
- 8 Channels: Digital I/O, Analog In, Temperature
- USB 1.1 and 2.0 Compatible Interface
- Easy to use with single byte commands - Can utilize a simple terminal emulator to control all functions.
- USB Port Powered
- Small Footprint; Easily Fits on Desktop



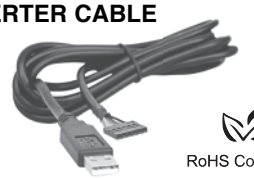
For quantities of 200 and up, call for quote.

MOUSER STOCK NO.	DLP Part No.	Description	Price Each			
			1	10	50	100
626-DLP-IO8	DLP-IO8	USB-Based 8-Channel Data Acquisition Module	29.96	29.10	27.25	26.75

FTDI USB TO TTL SERIAL CONVERTER CABLE

The new TTL-232R is a USB - TTL serial converter cable which will allow for a simple way to connect serial TTL level devices to USB.

The TTL-232R uses a FT232RQ chip which is housed within the USB "A" connector. A 1.8 meter (6 foot) cable is terminated with a 6 way 0.1" pitch header socket which provides access to the Transmit (Tx), Receive (Rx), RTS#, and CTS#, as well as VCC (5V) and GND

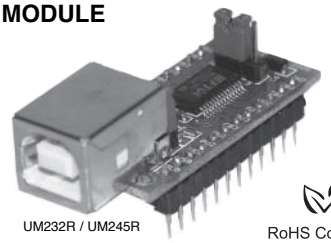


RoHS Compliant

MOUSER STOCK NO.	FTDI Part No.	Description	Price Each
626-DLP-TTL232R	TTL-232R	USB to TTL Serial Coverter Cable (5V I/O)	20.00
626-DLP-TTL-232R-3V3	TTL-232R-3V3	USB to TTL Serial Coverter Cable (3.3V I/O)	20.00

FTDI UM232R USB SERIAL MODULE

The UM232R module is a USB - Serial UART (TTL) development module for the FT232R IC device. The UM232R is supplied on a PCB designed to fit a 24 pin DIP socket and provides access to all UART and CBUS interface pins of the FT232R device. The UM232R can be configured as either USB bus-powered or self-powered and also supports 5V or 3V level interface IOs via two sets of jumper setting pins. Full hardware handshaking is supported and the UM232R can communicate at up to 3MBaud at TTL/CMOS levels.



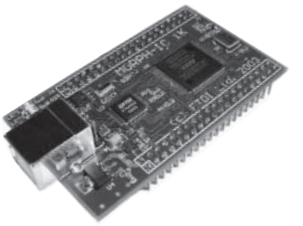
UM232R / UM245R

RoHS Compliant

MOUSER STOCK NO.	FTDI Part No.	Description	Price Each
626-DLP-UM232R	UM232R	FTDI UM232R USB Serial Module	20.00

FTDI MORPH-IC FPGA BASED MODULE

The FTDI Morph-IC module combines the flexibility of the FT2232C interface together with an Altera ACEX 1K series FPGA in a compact ready to use module. The power and IO pins of the module are brought out onto 2 x 20-pin, 0.1in pitch headers on the underside of its PCB, allowing easy connection to the pins. The module can also be plugged into a PCB using readily available mating connectors (two supplied). Morph-IC uses the Multi Protocol Synchronous Serial Engine (MPSSE) interface of the FT2232C to program/reprogram the FPGA over USB in a fraction of a second. No external FPGA programmer or serial EEPROM devices are required to use Morph-IC. The module is powered directly from the USB port and so does not require an external power supply. Morph-IC comes complete with a CD containing USB drivers, a Windows interface DLL with example code in several different programming languages. A full demo project is included, demonstrating how to use and interface to the module. VHDL source code and application software code (in Delphi) is included. Linux drivers and a Linux loader program are also included for those who are interested in alternative operating systems. The package also includes a Quartus II Software Starter Suite CD courtesy of Altera, which contains software for simulation and synthesis of the on-board FPGA, so no other software is required for FPGA development.



For quantities of 1000 and up, call for quote.

MOUSER STOCK NO.	FTDI Part No.	Description	Price Each			
			1	25	100	500
626-DLP-MORPHIC-RB	MORPHIC-RB	USB FPGA Module in Retail Box with CD	89.95	87.21	85.68	83.98
626-DLP-MORPHIC-OEM	MORPHIC-OEM	USB FPGA OEM Module Only	83.90	79.10	76.20	74.78

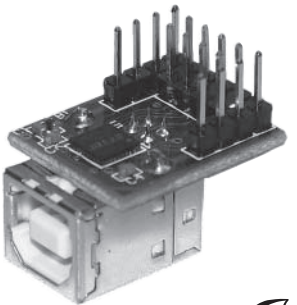
FTDI UM245R USB FIFO MODULE

The UM245R can be configured as either USB bus-powered or self-powered and also supports 5V or 3V level interface IOs via two sets of jumper setting pins. The UM245R can transfer data at up to 1 MegaByte per second. Ideal for rapid prototyping and development of FT245R designs, an attractive quantity discount structure also makes this module suitable for incorporation into low/medium volume finished product designs.

MOUSER STOCK NO.	FTDI Part No.	Description	Price Each
626-DLP-UM245R	UM245R	FTDI UM245R USB FIFO Module	20.00

FTDI MM232R MODULE

The MM232R is a mini development module for the FT232RQ IC device. It is a little bigger than a USB connector and provides USB - Serial UART interface in a extremely small form factor. It is ideal for new development purposes, and also for adding a USB interface to existing product designs. Based on the FT232RQ device, the MM232R supports RTS/CTS hardware handshaking and is powered from the USB port. Serial data communication is possible at up to 3MBaud at TTL level. In addition, some of the EEPROM configurable CBUS pins of the FT232R are brought out allowing the MM232R to be used to provide clock signals to external logic. Two 1x4 and one 2x4 board headers with a standard 0.1" pitch are supplied with the MM232R to allow for rapid prototyping and development.



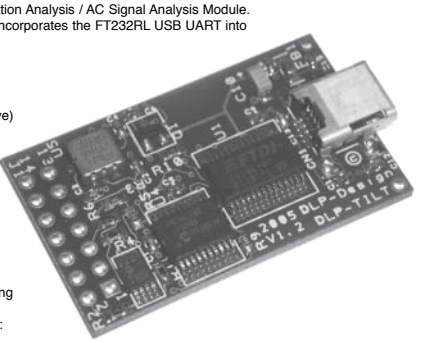
- Single chip USB to asynchronous serial data transfer interface.
- Entire USB protocol handled on the chip - No USB-specific firmware programming required.
- Data transfer rates from 300 baud to 3 Megabaud (RS422 / RS485 and at TTL levels) and 300 baud to 1 Megabaud (RS232).

RoHS Compliant

MOUSER STOCK NO.	FTDI Part No.	Description	Price Each
626-DLP-MM232R	MM232R	FTDI MM232R Module	18.00

DLP TILT MODULE

USB-Based Tilt Sensor / Accelerometer / Vibration Analysis / AC Signal Analysis Module. The DLP-TILT USB-to-accelerometer module incorporates the FT232RL USB UART into its design and has many applications:
- Vibration Analysis
- AC Signal Analysis
- Tilt Sensing
- Two-button mouse (pointing device alternative)
- +1-5V Analog In (single channel)
- Data Aquistion: 0-5V analogin, digtial 1/0
- Robotic/Motion Sensing and Control



Features:
- Microcontroller preprogrammed with data-acquisition functions
- 2-Axis, 2g accelerometer
- Single-byte access to all firmware features
- Virtual COM port drivers for easy programming interface
- Continuously streaming analog sample rates: 100-6K samples per second
- 4th-Generation USB interface silicon from FTDI (FT232R with internal ceramic resonator, internal setup EEPROM, & clock output for microcontroller)

MOUSER STOCK NO.	DLP Part No.	Description	Price Each
626-DLP-TILT	DLP-TILT	DLP TILT USB Based Module	50.00

DLP DESIGN USB Interface Products

Products may be RoHS compliant.
Check mouser.com for RoHS status.

"Add USB to your next project--it's easier than you might think!"

DLP Design's USB Interface products provide a high-speed, hot-swappable, user-friendly connection between your electronic device and a host PC. The USB interface will provide up to 500mA at 5 volts of power for your electronics. These boards make the extremely complex USB Interface easy for just about anyone to start using, without requiring any in-depth prior knowledge.

DUAL CHANNEL USB ADAPTERS

RoHS Compliant

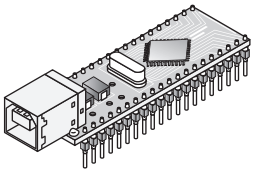
626-DLP2232M-G

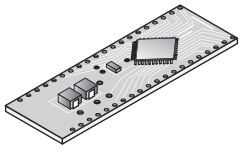
The DLP-2232M uses FTDI's FT2232C 3RD generation Dual Channel USB-FIFO/UART and offers a simple solution for interfacing ASIC/MCU/FPGA/DSP based designs to a host computer via USB. Each channel can be configured for either USB-UART or USB-FIFO via the on-board setup EEPROM. Rev 3 silicon from FTDI. No in-depth knowledge of USB required!

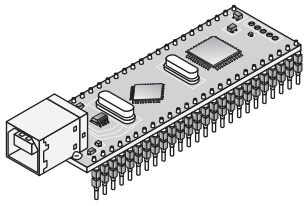
626-DLP2232ML-G

Same functional design as the DLP-2232M, the DLP-2232ML is perfect for space constrained designs.

- Dual channel, each can be configured for USB-FIFO or USB-UART
- Up to 8 megabit per second data rate
- USB 1.1/2.0 Compatible


626-DLP2232M-G


626-DLP2232ML-G


626-DLP2232PB-G

626-DLP2232PB-G / 626-DLP2232PB-CCS

The DLP-2232PB uses FTDI's 3RD generation FT2232C USB IC and a PIC Microchip 16F877A to form a rapid prototyping development tool. On-board firmware uploader included - no device programmer required!

- Simple USB-FIFO interface to PIC Microchip 16F877A microcontroller
- On-board device programmer for uploading firmware to the 16F877A - no device programmer required!
- Plugs into a standard 50 pin, 0.9in wide DIP socket
- Example source code provided for Token firmware feature
- Up to 2 megabit per second data rate to host computer.
- USB 1.1/2.0 Compatible
- CCS Version includes a DLP2232PB Module and CCS Compiler CD (Limited Version)
- RoHS Compliant

Embedded Modules

For quantities of 250 and up, call for quote.

MOUSER STOCK NO.	DLP Part No.	Price Each			
		1	10	50	100
626-DLP2232M-G	DLP-2232M-G	35.00	33.43	32.09	30.95
626-DLP2232ML-G	DLP-2232ML-G	35.00	33.43	32.09	30.95
626-DLP2232PB-G	DLP-2232PB-G	50.00	45.00	42.00	41.00

Development Tool

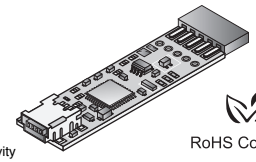
MOUSER STOCK NO.	DLP Part No.	Description	Price Each
626-DLP2232PB-CCS	DLP2232PB-CCS	DLP-2232PB Module & Compiler	110.00

USB TO SERIAL ADAPTER

This USB-to-serial adapter is designed to easily connect a microcontroller/DSP/FPGA/etc to a host PC or upgrade a legacy RS232 device to USB with minimal design effort. Virtual Com Port (VCP) drivers are provided royalty-free that make the DLP-TXRX look like a standard Windows/Linux/Mac RS232 port to the users host program. An attractive quantity discount structure makes this module suitable for incorporation into low- and medium-volume finished products.

Features:

- Connection to host PC/Mac made via mini USB connector
- As few as 2 wire serial interface (RX, TX and ground)
- Standard baud rates from 300 to 921,600 baud
- Support for non-standard baud rates (ApNote AN232-01)
- Open-collector output available for resetting microcontroller under software control (DTR)
- Input provided for user-selectable interface voltage
- Red and green LEDs to indicate transmit and receive activity



RoHS Compliant

For quantities of 250 and up, call for quote.

MOUSER STOCK NO.	DLP Part No.	Price Each	
		1	100
626-DLP-TXRX-G	DLP-TXRX-G	20.00	19.00

DLP-D USB BASED SECURITY DONGLE

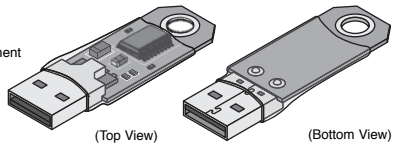
The DLP-D Security Dongle is pre-programmed with a unique identification number (Serial Number) that is readable over USB but cannot be altered by any means. Since each serial number is unique, this device provides a way of linking application software to a specific hardware dongle with a high level of security.

Features:

- Hard-coded, unique serial number
- USB 1.1 and 2.0 compatible interface
- Small size; easily fits on key chain
- 3rd-Party support for application development

Applications:

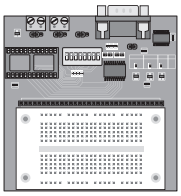
- Access control
- Copy protection


(Top View) (Bottom View)

MOUSER STOCK NO.	DLP Part No.	Description	Price Each
626-DLP-D	DLP-D	USB Security Dongle	12.99

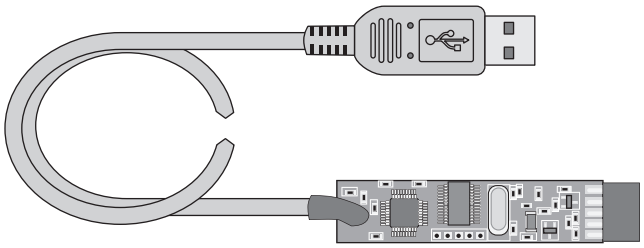
DLP-PROTO PROTOTYPING BOARD

Works with both the DLP-USB232M and DLP-USB245M modules. Great for prototyping new designs. Example source code provided for enabling Bit-bang mode in Visual C++ and Visual Basic. Makes easy work of prototyping and testing USB-to-RS232 designs. LED indicators for data lines and selected status lines.



MOUSER STOCK NO.	DLP Part No.	Description	Price Each		
			1	25	100
626-DLP-PROTO	DLP-PROTO	Prototype testing board. C++ and Visual Basic enabled	90.00	81.82	76.50

DLP-FLASH PROGRAMMER



The DLP-FLASH is an innovative USB based adapter for programming both Scenix (Ubicom) and Microchip PIC Flash based MPU's. Not only is it the ideal companion for the DLP USB/Microcontroller modules and training kits, but is a worthy addition to the toolkit of any hobbyist or professional who develops projects using either family of MPU's.

No additional cables or external power source required. All power is taken from the USB port via the provided USB cable. In-circuit programming -- no more loading the target microcontroller into a device programmer. Full application software provided.

Compatible With:	
PIC Microchip	**Scenix/Ubicom**
16F84A	SX28
16F870	SX48
16F871	
16F872	
16F873	
16F874	
16F876	
16F877	

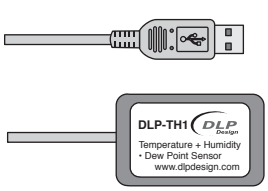
For quantities of 500 and up, call for quote.

MOUSER STOCK NO.	DLP Part No.	Description	Price Each		
			1	25	100
626-DLP-FLASH	DLP-FLASH	DLP-Flash Device Programmer	85.00	77.27	72.25

DLP-TH1 TEMPERATURE AND HUMIDITY SENSOR

The DLP-TH1 is shipped with Windows 98/ME/2000/XP compatible software and USB drivers. Additionally, the most recent versions of the application software and USB drivers for the DLP-TH1 are available as a free download from www.dlpdesign.com/usb/th1.html.

RoHS Compliant



MOUSER STOCK NO.	DLP Part No.	Description	Price Each		
			1	25	100
626-DLP-TH1-G	DLP-TH1-G	Temperature and Humidity Sensor	99.95	91.77	83.49

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DLP DESIGN USB Interface Products

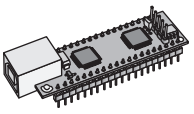
Products may be RoHS compliant.
Check mouser.com for RoHS status.

"Add USB to your next project--it's easier than you might think!"

DLP Design's USB Interface products provide a high-speed, hot-swappable, user-friendly connection between your electronic device and a host PC. The USB interface will provide up to 500mA at 5 volts of power for your electronics. These boards make the extremely complex USB Interface easy for just about anyone to start using, without requiring any in-depth prior knowledge.

USB MICROCONTROLLER DEVELOPMENT BOARDS

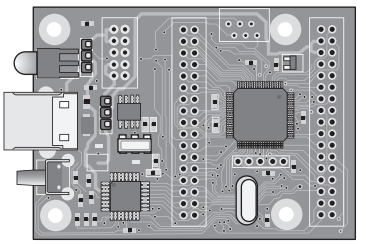
RoHS Compliant



DLP-245SY-G

- Simple USB-FIFO interface to Parallax SX48 microcontroller (50MHz)
- Plugs into a standard 40-pin, 0.6in wide DIP socket
- Example source code provided for Token firmware feature
- Up to 7 megabit per second data rate to host computer
- USB 1.1 compliant
- Rev 2 silicon from FTDI
- No in-depth knowledge of USB required

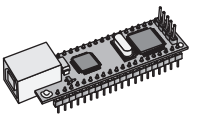
The DLP-245SY is a powerful integrated module based on the DLP-USB245M USB-FIFO adapter coupled with a Ubicom SX48 microcontroller and royalty free USB drivers. It plugs into a standard 40 pin 0.6in wide DIP socket and is ideal for rapid prototyping and development of USB / Ubicom based designs. Token I/O code pre-programmed into the SX48's ROM for basic port pin input/output capability including access to an external, on-board EEPROM, and external digital temperature sensors. The SX48's Flash ROM can be easily erased and reprogrammed if required using the optional DLP-Flash Programmer. Refer to the datasheet for full details.



DLP-245PL-G

- Simple USB-FIFO interface to PIC Microchip 18LF8720 microcontroller
- 50 I/O pins (including A/D inputs) plus 8-bit data bus
- Example source code provided for Token firmware feature
- Up to 2 megabit per second data rate to host computer
- USB 1.1/2.0 compatible
- Rev 2 silicon from FTDI
- No in-depth knowledge of USB required
- RoHS Compliant

The DLP-245PL is a powerful integrated module based on the DLP-USB245M USB-FIFO adapter coupled with a PIC 18LF8720 MPU and royalty free USB drivers. The 18LF8720 microcontroller is preprogrammed with basic functionality for accessing the port pins and can be reprogrammed with user hex code via a 5-pin header that is compatible with Microchip's MPLAB ICD2 device programmer/debugger (purchased separately). Refer to the datasheet for full details.



DLP-245PL-G-CCS

- Simple USB-FIFO interface to PIC Microchip 16F877 microcontroller
- Plugs into a standard 40-pin, 0.6in wide DIP socket
- Example source code provided for Token firmware feature
- Up to 2 megabit per second data rate to host computer
- USB 1.1/2.0 Compatible
- Rev 2 silicon from FTDI
- No in-depth knowledge of USB required

The DLP-245PB is a powerful integrated module based on the DLP-USB245M USB-FIFO adapter coupled with a PIC 16F877 MPU and royalty free USB drivers. It plugs into a standard 40 pin 0.6in wide DIP socket and is ideal for rapid prototyping and development of USB / PIC based designs. Token I/O code pre-programmed into the 16F877's ROM for basic port pin input/output capability including access to the A/D, EEPROM, and external digital temperature sensors. The 16F877's Flash ROM can be easily erased and reprogrammed if required using the optional DLP-Flash Programmer. Refer to the datasheet for full details.

For quantities of 500 and up, call for quote.

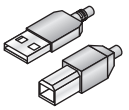
MOUSER STOCK NO.	DLP Part No.	Description	Price Each		
			1	25	100
626-DLP-245SY-G	DLP-245SY -G	DLP-245SY USB/Microcontroller PCB	85.00	77.27	72.25
626-DLP-245PL-G	DLP-245PL -G	DLP-245PL USB/Microcontroller PCB	65.00	62.50	59.15
626-DLP-245-G-CCS	DLP-245PL-G-CCS	DLP-245PLA-G Module and CCS Compiler	125.00	125.00	125.00

USB CABLES

Features:

- UL2725 Cable
- 100% Open, short & mis-wire tested
- RoHS Compliant

A



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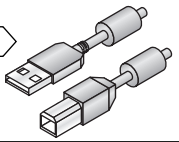


For quantities of 500 and up, call for quote.

MOUSER STOCK NO.	Fig.	Color	Length (In.)	Description	Price Each			
					1	10	25	100
172-1024-E	A	Black	1.8M (71)	USB A male to USB B male	3.26	2.71	2.47	2.24
172-1027-E	B	Black	1.5M (59)	Filtered USB A male to USB B male	3.88	3.24	2.54	2.67

USB ADAPTER BOARDS

RoHS Compliant

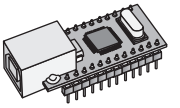
DLP-USB245M-G

- Add USB connectivity to your next project
- Up to 8 megabit per second data rate
- USB 1.1 compliant
- Simple FIFO interface to MCU, FPGA, CPU, etc.
- Rev 2 silicon from FTDI
- No in-depth knowledge of USB required
- RoHS Compliant

The DLP-USB245M USB-FIFO adapter offers a simple straight-forward solution for interfacing ASIC or MCU based designs to USB. It comes complete with royalty-free drivers for most common operating systems. Features include an easy to use FIFO-like interface, a data transfer rate of up to 8 megabits per second and a standard .6 inch, 24 pin DIP footprint.

DLP-USB232M-G

- Easily convert legacy RS-232 devices to USB
- Up to 3 megabaud data rate
- USB 1.1 compliant
- Full handshaking & modem interface signals
- Rev 2 silicon from FTDI
- No in-depth knowledge of USB required
- RoHS Compliant



The DLP-USB232M USB-UART Adapter PCB is the ideal solution for upgrading legacy RS232 designs to USB. It comes complete with royalty-free drivers for most common operating systems. Features include data transfer rates of up to 3 million baud, a full set of modem handshaking controls and a standard .6 inch, 24 pin DIP footprint.

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	DLP Part No.	Description	Package	Price Each		
				1	25	50
626-DLP-USB245M-G	DLP-USB245M-G	DLP-USB245M USB-FIFO Adapter PCB	DIP-24	25.00	22.73	21.25
626-DLP-USB232M-G	DLP-USB232M-G	DLP-USB232M USB-UART Adapter PCB	DIP-24	25.00	22.73	21.25

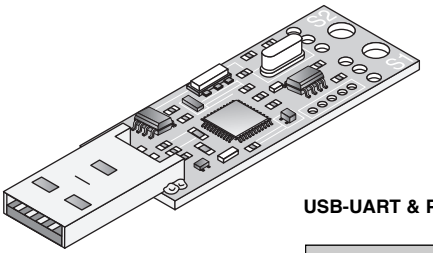
USB DATA ACQUISITION

Schematics available on-line. USB 1.1 Compliant.
The onboard PIC12F629 microcontroller can be reprogrammed with user code (requires programmer).
Drivers and test applications can be downloaded from the website

Acquire data from the world around you using these USB based data acquisition boards.
Learn how to interface to FTDI's FT232BM USB-UART IC using
small microcontrollers and simple RS232-like commands.
Demonstration code now available upon purchase for Visual C++ and Visual Basic.
Microcontroller C source code also available upon purchase

626-DLP-TEMP-G

- DLP-TEMP 2-Channel Temperature Acquisition Board
- Monitor and log digital temperature data from 1 or 2 sensors (one DS18B20 sensor included with purchase of board)
- RoHS Compliant



RoHS Compliant

USB-UART & PICMicro Based Data Acquisition Board

For quantities of 500 and up, call for quote.

MOUSER STOCK NO.	DLP Part No.	Price Each			
		1	10	50	100
626-DLP-TEMP-G	DLP-TEMP-G	25.00	23.00	22.00	21.00

FTDI UART Chips and Vinculum Host Controllers

RoHS Compliant **This page of product is compliant.**

The VNC1L USB Host Controller ICs not only handle the USB Host Interface, and data transfer functions but owing to the inbuilt 8/32-bit MCU and embedded Flash memory, VNC1L encapsulates the USB device classes as well. When interfacing to mass storage devices such as USB Flash drives, VNC1L also transparently handles the FAT file structure communicating via UART, SPI or parallel FIFO interfaces via a simple to implement command set. The VNC1L device features two USB Ports which can be individually configured by firmware as Host or Slave ports. VNC1L brings cost effective USB Host capability to products that previously did not have the hardware resources available. As VNC1L comes complete with FTDI's in-house developed firmware, there are no USB software stacks to license, indeed, no knowledge of USB is required to use these devices.

FTDI VNC1L-1A USB HOST CONTROLLER IC

The VNC1L device which features two USB Ports which can be individually configured by firmware as Host or Slave ports.

RoHS Compliant

Features:

- 8/32 bit V-MCU Core
- Dual DMA controllers for hardware acceleration
- 64k Embedded Flash Program Memory
- 4k internal Data SRAM
- 2 x USB 2.0 Slow/Full speed Host/Slave Ports
- UART, SPI and Parallel FIFO interfaces
- PS2 legacy Keyboard and Mouse Interfaces
- Up to 28 GPIO pins depending on configuration
- 3.3V operation with 5V safe inputs
- Low power operation (25mA running/2mA standby)
- Inbuilt FTDI firmware easily updated in the field
- LQFP-48 RoHS compliant package
- Multi-processor configuration capable

For quantities of 1000 and up, call for quote.

MOUSER STOCK NO.	FTDI Chip Part No.	Description	Price Each			
			1	50	100	500
895-VNC1L-1A	VNC1L-1A	FTDI Vinculum Host Controller IC	11.65	10.60	10.15	9.50

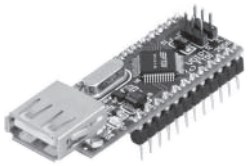
FTDI VDIP1 MODULE

The VDIP1 module is an MCU to USB host controller development module for the VNC1L device. VDIP1 is supplied on a PCB designed to fit a 24-pin DIP socket and provides access to all UART, SPI and FIFO interface pins of the VNC1L device.

RoHS Compliant

Features:

- Jumper selectable UART, SPI or FIFO MCU Interfaces
- Uses FTDI's VNC1L device
- USB "A" type socket to interface with USB peripherals
- 2nd USB Interface available via module pins if required
- Single 5V supply input
- Auxiliary 3.3V/200mA power output to power external logic
- Power Good and Traffic Indicator LEDs
- Reset# and Prog# signals allow device programming via the UART interface if required.



For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	FTDI Chip Part No.	Description	Price Each	
			1	10
895-VDIP1	VDIP1	FTDI Vinculum MCU to USB Host Controller Module	26.80	24.15

FTDI VDRIVE2 MODULE

VDRIVE is possibly the easiest solution for adding a USB Flash drive interface to existing products. Only four signal lines plus 5V/GND require to be connected. Using the VDIF firmware, the interface can be selected between UART or SPI modes using the on-board jumpers.

RoHS Compliant

Features:

- One USB "A" socket to connect to USB Flash Drive
- Uses FTDI's VNC1L device
- Link Selectable UART or SPI interface
- Only 4 signals to connect excluding PWR/GND
- 0.1" (2.54mm) pitch 6-pin connector compatible with TTL-232R-3V3 for easy evaluation
- Single 5V supply required
- Uses VDIF firmware and command set

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	FTDI Chip Part No.	Description	Price Each	
			1	10
895-VDRIVE2	VDRIVE2	FTDI Vinculum Flash Drive Interface Module	26.80	24.15

FTDI VMUSIC2 MODULE

VMUSIC is a product that not only lets you add USB Flash drive interfacing to your product but allows you to play back MP3 and other popular digital music formats direct from a USB Flash drive.

RoHS Compliant

Features:

- One USB "A" socket to connect to USB Flash Drive
- Stereo 3.5mm headphone jack socket and audio line-out connector for audio playback.
- Uses FTDI's VNC1L device coupled with VLSI VS1003 IC for music playback.
- Link Selectable UART or SPI interface
- Only 4 signals to connect excluding PWR/GND
- 0.1" (2.54mm) pitch 6-pin connector compatible with TTL-232R-3V3 for easy evaluation
- Single 5V supply required
- Uses extended VDIF command set

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	FTDI Chip Part No.	Description	Price Each	
			1	10
895-VMUSIC2	VMUSIC2	FTDI Vinculum Flash Drive Interface w/MP3 Module	41.05	37.01

FTDI DLP-VLOG MODULE

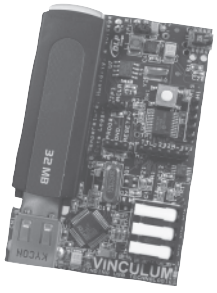
Features:

- Virtually unlimited data storage utilizing FTDI's new Vinculum™ USB Host IC
- Data logged to USB Flash drive
- Low-power modes for long battery life
- System power via two AA batteries
- Lead-free; RoHS compliant

RoHS Compliant

Development Kit Includes:

- VDLP-VLOG module
- C source code for the microcontroller firmware
- Windows support software for real time clock setup
- Windows data conversion software
- C compiler and device programmer/debugger
- 32MB USB Flash drive containing all documentation, software & source code



The DLP-VLOG is intended as both a demonstration platform for the new Vinculum IC as well as a learning tool. The development kit is designed to log temperature, humidity and voltage data to a USB Flash drive. Using the Vinculum IC from FTDI, this system demonstrates how one can provide virtually unlimited data storage for a small microcontroller.

This system can be beneficial to electronics enthusiasts with virtually any level of technical expertise. Based on the Vinculum Host Controller IC and the Microchip PIC16F88 Microcontroller, the DLP-VLOG can function as a digital design trainer, a microprocessor development system or as a rapid path to learning how to implement a USB Host Controller for interfacing a USB Flash drive to a small microcontroller.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	FTDI Chip Part No.	Description	Price Each
626-DLP-VLOG	DLP-VLOG	DLP VLOG Vinculum Development Kit	250.00

USB-UART AND USB INTERFACE IC'S

FTDI USB To Serial UART IC Devices:

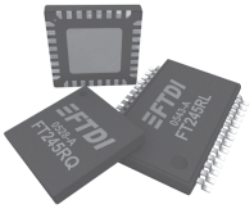
The FT232BL includes a 3.3V regulator, USB Tranceiver that provides USB 1.1 / USB 2.0 full speed physical interface and a 6MHz Oscillator. The FT232RL/RQ has all the features of the BL but includes onboard EEPROM, as well as a 12MHz Oscillator and the FTDIChip-ID™ security dongle feature. The FT232R features a wide range of royaltyfree FTDI developed drivers for 32 and 64 bit operating systems including Windows, CE, XP, Vista, Linux and Mac OS.

FTDI FT2232 Dual UART/FIFO IC Devices:

The FT2232 device features two multi-purpose UART/FIFO controllers which can be configured individually in several different modes. As well as a UART interface, a FIFO interface and the Bit-Bang IO mode of the FT232B and FT245B devices, the FT2232 offers a variety of additional new modes of operation including a Multi-Protocol Synchronous Serial Engine (MPSSE) interface which is designed specifically for synchronous serial protocols such as I2C, JTAG and SPI bus. The FT2232D has an extended temperature range (-40ºC to +85ºC) and adds CPU FIFO mode.

FTDI FT245R USB To Parallel FIFO IC Devices:

The FT245R is a USB to parallel FIFO interface, with the new FTDIChip-ID™ security dongle feature. In addition, asynchronous and synchronous bit bang interface modes are available. USB to parallel designs using the FT245R have been further simplified by fully integrating the external EEPROM, clock circuit and USB resistors onto the device. The FT245R adds a new function compared with its predecessors, effectively making it a "2-in-1" chip for some application areas.



RoHS Compliant

For quantities of 1000 and up, call for quote.

MOUSER STOCK NO.	FTDI Chip Part No.	Description	Price Each			
			1	50	100	500
895-FT232RL	FT232RL	FTDI USB to Serial UART IC, 28 Pin SSOP	4.15	3.80	3.27	2.77
895-FT232RQ	FT232RQ	FTDI USB to Serial UART IC, 32 Pin QFN	4.15	3.80	3.27	2.77
895-FT232BL	FT232BL	FTDI USB to Serial UART IC, 32 Pin LQFP	5.25	4.77	4.13	3.82
895-FT245RL	FT245RL	FTDI USB to Parallel FIFO IC, 28 Pin SSOP	4.75	3.95	3.65	3.25
895-FT245RQ	FT245RQ	FTDI USB to Parallel FIFO IC, 32 Pin QFN	4.75	3.95	3.65	3.25
895-FT245BL	FT245BL	FTDI USB to Parallel FIFO IC, 32 Pin LQFP	5.57	5.05	4.36	4.02
895-FT2232L	FT2232L	FTDI Dual USB UART/FIFO I.C, 48 Pin LQFP	7.75	6.98	6.05	5.74
895-FT2232D	FT2232D	FTDI Dual USB UART/FIFO I.C, 48 Pin LQFP	7.75	6.98	6.05	5.74

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LANTRONIX Device Servers

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EMBEDDED DEVICE SERVERS

Lantronix recognizes that design engineers are looking for a simple, cost-effective and reliable ways to seamlessly embed network connectivity into their products. With very little effort, minimal development time and at a fraction of the time required to develop an in-house solution, OEMs can add full Ethernet and/or wireless connectivity to their products so they can be managed over a network or the Internet. Why build it from scratch yourself when we can provide a small module that's ready for your application? Lantronix embedded device servers are a cost-effective and reliable way to seamlessly embed network connectively into your products. Our expertise in device networking, a stable real-time operating system (RTOS) and TCP/IP stack enables you to add full Ethernet and/or wireless connectivity your products with minimal effort, programming and development time. Lantronix's compact, cost-effective embedded device networking products deliver a complete feature set, including encryption, serial support options, management flexibility, 10/100 Base-T Ethernet or wireless connectivity, and the ability to customize.

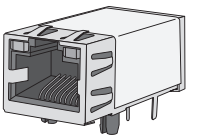
XPort®/ XPort® AR - Embedded Device Server

XPort® is the most compact, integrated solution available to web-enable any device with a serial interface. By simply adding XPort to a product design, device manufacturers can now offer Ethernet connectivity as a standard feature within weeks—instantly increasing product value, enhancing end-user experience and facilitating new service delivery options.

XPort® Features:
- Minimal engineering effort required to web enable a serial device
- Remote command and control of edge devices
- Real-time edge device status via e-mail alerts
- 256-bit AES encryption for secure communications
- EMC/EMI-compliant; RoHS-compliant
- Everything you need – all in a single RJ45 package

XPort® AR Features:
- A fully programmable device computing platform based on corporate IT standards – Cisco®-like CLI, XML, RSS
- Web-enable up to three electronic devices, quickly and easily
- Provide robust "data center grade" security, including SSL and SSH, for networked devices
- Offer true IEEE 802.3af compliant pass-through Power over Ethernet (PoE)

RoHS Compliant



XPort® Illustrated

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	Lantronix Part No.	Description	Price Each
XPort®			
515-XP1001000-03R	XP1001000-03R	XPort XE - 10/100 Ethernet Transceiver to Serial Interface; RoHS; Extended Temperature	54.00
515-XP1001001-03R	XP1001001-03R	XPort XE - 10/100 Ethernet Transceiver to Serial Interface; RoHS; Commercial Temperature	49.00
515-XP1001000M-03R	XP1001000M-03R	XPort XE - 10/100 Ethernet Transceiver to Serial Interface; RoHS; Extended Temperature, with MODBUS	55.00
515-XP1002000-03R	XP1002000-03R	XPort SE - 10/100 Ethernet Transceiver to Serial Interface with 256-bit AES Encryption; RoHS; Extended Temperature	53.25
515-XP1002001-03R	XP1002001-03R	XPort SE - 10/100 Ethernet Transceiver to Serial Interface with 256-bit AES Encryption; RoHS; Commercial Temperature	52.00
515-XP100200S-03R	XP100200S-03R	XPort SE - 10/100 Ethernet Transceiver to Serial Interface with 256-bit AES Encryption; RoHS; Extended Temp. - Sample	54.50
515-XP1004000-03R	XP1004000-03R	XPort 485 - RS-485 Support with 256-bit AES Encryption; RoHS; Extended Temperature	55.00
515-XP100400S-03R	XP100400S-03R	XPort 485 - RS-485 Support with 256-bit AES Encryption; RoHS; Extended Temperature - Sample Package	57.00
515-XP100200K-03	XP100200K-03	XPort with Evaluation Board, Cables, Power Supply and Software; Commercial Temperature; Encryption	140.00
XPort®AR			
515-XP3002000-01	XP3002000-01	XPort AR – Ethernet to Serial Embedded Processor Module with SSH Client & Server, SSL, 1024-bit AES (Rijndael), 3DES and RC4 Encryption, Public/Private-keys, and password protection; Extended Temperature	88.00
515-XP300200S-01	XP300200S-01	XPort AR – Ethernet to Serial Embedded Processor Module with SSH Client & Server, SSL, 1024-bit AES (Rijndael), 3DES and RC4 Encryption, Public/Private-keys, and password protection; Extended Temperature - Sample Package	90.00
515-XP300200K-01	XP300200K-01	XPort AR with Evaluation Board, Cables, Power Supply and Software; Commercial Temperature; Encryption	189.00

XPort® Direct™ - Embedded Device Gateway

XPort® Direct™ Features:
- Affordable network connectivity gateway for any device with a serial interface on its microcontroller
- Complete TCP/IP protocol stack and Windows deployment software
- Compact low profile (<12 mm)
- Two GPIO pins
- Integrated module with RJ45 featuring dedicated networking SoC
- Up to 230 Kbps data rate
- 2 x 12 pin,2 mm headers
- RS-232/RS-485 ready

NEW FROM SUPPLIER

XPort® Direct™ Illuustrated

RoHS Compliant

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	Lantronix Part No.	Description	Price Each
515-XD1001000-01	XD1001000-01	XPort Direct - XD1001000-01 Device Network Ethernet Module	36.75
515-XD100100S-01	XD100100S-01	XPort Direct - XD1001000-01 Device Network Module Sample	41.25
515-XD100100K-01	XD100100K-01	XPort Direct - XD1001000-01 Device Network Module Demo Kit	119.00

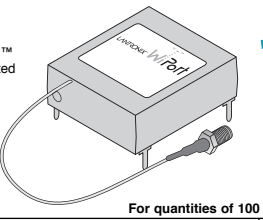
WiPort™ / WiPort™NR - Wireless Embedded Device Server Modules

The WiPort is the most compact, integrated solution available to add 802.11b wireless networking to any edge device with a serialinterface. Using our highly integrated hardware and software platform, you will add to your bottom line by significantly reducing productdevelopment time, risk and cost. With the same form factor and pinout of the 802.00 b/g wireless WiPort, the WiPort NR is a wired Ethernet solution enabling wired/wireless layout compatibility on a single PCB design, and a seamless migration path from Ethernet connectivity to 802.11 wireless networking using the WiPort.

WiPort™ Features:
- Serial to 802.11 b/g conversion
- Wired ethernet to 802.11 b/g WLAN bridging
- Optional end-to-end 128, 192 and 256 bit AES encryption
- WPA, PSK, TKIP security, 128 bit WEP encryption
- Easy configuration through a web interface
- Embedded web server

WiPort™NR Features:
- Ethernet 10/100 connectivity
- Two serial inputs
- 2MB of Flash memory
- 11 GPIO pins
- PoE-capable with external circuitry
- EMC/EMI-compliant
- Optional 256-bit AES Rijndael encryption for secure communications
- Electrical Interface to CAN and SPI Bus available
- Extensive networking protocol support including TCP/IP

WiPort™ Illustrated



NEW FROM SUPPLIER

RoHS Compliant

For quantities of 100 and up, call for quote.

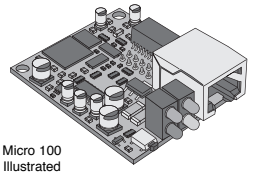
MOUSER STOCK NO.	Lantronix Part No.	Description	Price Each 1	Price Each 10
515-WP2001000G-02	WP2001000G-02	WiPort - Standard WiPort	119.00	117.00
515-WP2002000G-02	WP2002000G-02	WiPort - Standard WiPort with AES	123.00	120.00
515-WP200200SG-02	WP200200SG-02	WiPort Sample Package - WiPort with Software	126.00	- - -
515-WP5001000-01	WP5001000-01	WiPort NR Extended Temp; AES encryption	55.00	54.25
515-WP200200KG-02	WP200200KG-02	WiPort Development Kit - WiPort with Evaluation Board, Cables, Power Supply, Antenna and Software	299.00	- - -
515-930-033-R	930-033-R	WiPort Accessory Antenna	8.50	7.00

Micro 100 / WiMicro™ Board Level Device Servers

The Lantronix Micro100 is a board-level product for OEM users who want to embed proven mainstream Ethernet connectivity in their products quickly and economically.

Micro 100 Features:
- Flexible, well-developed IP protocol stack
- Ethernet RJ45 (10/100Base-T) connector on the board
- Accepts 5 VDC regulated input power
- HTTP, serial, Telnet and SNMP management
- Flash ROM for easy software upgrades
- Custom protocol support available
- 256-bit AES encryption for secure communications
- TTL serial interface
- Two serial ports

WiMicro™ Features:
- Upgrade to board level wireless – quickly and easily
- Form factor compatible with our Micro and Micro100 boards
- "Plug and Play" wireless connectivity
- Wireless security using 128-bit WEP and WPA-PSK, TKIP
- End-to-end security using 256-bit Rijndael encryption
- Data Rate: 300bps to 230 Kbps
- Embedded web server



Micro 100 Illustrated

RoHS Compliant

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Lantronix Part No.	Description	Price Each
515-MO00AA002-01R	MO00AA002-01R	Micro100 Board - No RJ45 Jack, No LEDS, includes TTL Pin Header, RoHS Compliant	72.00
515-MO11AA002-01R	MO11AA002-01R	Micro100 Board - includes RJ45 Jack, LEDS, TTL Pin Header, RoHS Compliant	72.00
515-MO22AA002-01R	MO22AA002-01R	Micro100 Board - Pin Headers for Ethernet, TTL, and LED connections, RoHS Compliant	72.00
515-MO00AA0E2-01R	MO00AA0E2-01R	Micro100 Board with AES Encryption - No RJ45 Jack, No LEDS, includes TTL Pin Header, RoHS Compliant	77.00
515-MO11AA0E2-01R	MO11AA0E2-01R	Micro100 Board with AES Encryption - includes RJ45 Jack, LEDS, TTL Pin Header, RoHS Compliant	77.00
515-MO22AA0E2-01R	MO22AA0E2-01R	Micro100 Board with AES Encryption - Pin Headers for Ethernet, TTL, and LED connections, RoHS Compliant	77.00
515-MICRO100KIT	MICRO100-KIT	Micro100 Board Kit - Micro100 with Carrier Board, Cables, Adapter, Power Supply and Software	149.00
515-WM11A0002-01	WM11A0002-01	WiMicro Board - Micro Board with WiPort Embedded Device Server (802.11 networking), 128-bit WEP/WPA Encryption	165.00

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LANTRONIX Device Servers

LANTRONIX®

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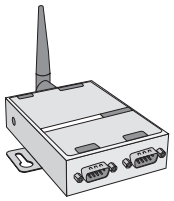
EXTERNAL DEVICE SERVERS

External device servers from Lantronix can network-enable just about any device with serial connectivity in a matter of minutes. They provide the ability to remotely control, monitor, diagnose and troubleshoot your equipment over a network or the Internet. And they enable you to preserve your investment in your present equipment. You can choose Ethernet or wireless, advanced encryption for maximum security, and device servers designed for commercial or heavy-duty industrial applications.

WiBox® - Wireless External Device Servers

WiBox® dual-port device servers enable you to connect serial devices to 802.11b/g wireless networks, quickly and easily. By merging wireless communications and Lantronix device server technology, WiBox simplifies connectivity to devices in applications where mobility is required or cabling is impractical.



WiBox® Features:

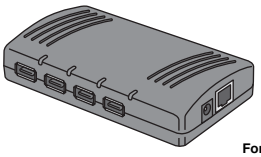
- Enables access to remote devices while minimizing costly cabling
- Provides network mobility for untethered communication
- Two DB9 DTE serial ports supporting RS-232, RS-422 or RS-485 communication
- Compact size enables it to fit almost anywhere
- Industry standard 802.11b/802.11g wireless interface
- Secure wireless communication: WEP, WPA, TKIP
- 256-bit AES – end-to-end encryption
- Ethernet-or-wireless bridging

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Lantronix Part No.	Description	Price Each
515-WB2100EG1-01	WB2100EG1-01	Serial to 802.11b wired or wireless device server with 10/100 Ethernet. Two serial ports (DB9-male, DTE) pinned the same as a standard PC and 4kv direct ESD protection provided for both serial, domestic power supply, 9-30 Volt DC.	349.00
515-WB2100EG0-01	WB2100EG0-01	Board level Serial to 802.11b wired or wireless device server with 10/100 Ethernet. Two serial ports (DB9-male, DTE), pinned the same as a standard PC and 4kv direct ESD protection provided for both serial, domestic power supply, 9-30 Volt DC.	349.00

UBox® - USB - to - Ethernet Device

UBox removes the distance limitations of USB, enabling you to access USB peripherals over a network. These devices can be individually dedicated or shared among users, maximizing your USB device investment.



UBox® Features:

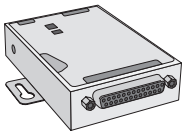
- Enables USB peripherals to be shared over a network
- Eliminates distance limitations of USB
- Removes the necessity of a dedicated PC
- Ethernet enabled USB host controller
- 4 USB ports (12Mbps)
- 10/100 Ethernet interface
- Supports DHCP, Static IP or Zero config IP addressing

For quantities of 10 and up, call for quote.

515-UB4100001-01	UB4100001-01	"UBox® USB-to-Ethernet Device Server, enables 4 USB ports to be shared over a network, 10/100 Ethernet Interface, US Power, Windows® 98/ME/NT200/XP-based software included.	179.00

UDS/EDS - External Device Servers

The UDS single-port and dual port device servers provide a quick, simple and cost-effective way to bring the advantages of data accessibility and remote management to equipment not currently connected to a network.



UDS1100 Illustrated

RoHS Compliant

UDS Features:

- Replace expensive dedicated PCs with fast and reliable networking technology
- Compact size enables it to fit almost anywhere
- Supports RS-232, RS-422 and RS-485 serial connections
- 10Mbps or 10/100 Mbps Ethernet through an RJ45 connector
- Configure via HTTP, DHCP, Telnet or serial
- Flash ROM for easy upgrades

EDS Features:

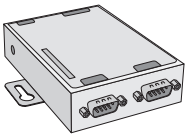
- Remotely monitor, manage and share devices over a network or internet
- True IEEE 802.3af POE

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Lantronix Part No.	RoHS Compliant	Description	Price Each
515-UD1100001-01	UD1100001-01	YES	1 DB25F RS232C/485/422 DCE serial interface, 2 10/100 (RJ45) ethernet interface external 110Volt AC adapter.	149.00
515-UD21100001-01	UD21100001-01	YES	2 DB9M RS232 serial interfaces, a 10/100 (RJ45) Ethernet interface, and Lantronix robust operating system. Installation is simple using our Device Installer utility, and web browser.	249.00
515-MSS100-21	MSS100-21	YES	1 DB25M DTE RS232 serial port, 10/100 RJ45 networking port, concurrent IPX, TCP/IP and LAT support, Flash ROM, diagnostic LEDs, installation guide, CD-Rom with EZWebCon software, Com Port Redirector software, 110Volt AC Adapter.	349.00
515-ED41000P0-01	ED41000P0-01	YES	EDS 4100, 4 DB9M serial ports, 2 RS-232, 2 RS-232/422/485, 10/100 RJ45 network interface, POE - 802.3af power source. Power connections: 9-30 VDC barrel and 42-56 VDC screw terminal. No power supply included.	475.00

SecureBox® - Secure External Device Servers

The SecureBox family of device servers offers the most secure way to add formerly isolated electronic equipment to the Ethernet network. With this capability, virtually any device with a serial port can be remotely accessed and controlled securely over the network or the Internet. This adds an unprecedented level of flexibility and efficiency to your business, and breathes new life into your existing equipment.



SD2100001-01 Illustrated

RoHS Compliant

Features:

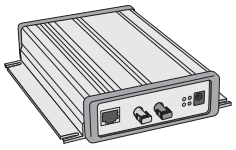
- Securely network-enable serial devices with 128-256 bit AES-certified encryption
- Transparent communications - no need to develop special software
- Two RS-232 DTE serial ports pinned the same as PC for easy connection
- 10/100 Ethernet Interface

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Lantronix Part No.	Description	Price Each
515-SD1100001-01	SD1100001-01	Secure Serial Interface (RS-232, RS-422, RS-485), 10Base-T/100Base-TX Ethernet, diagnostic LEDs, AC power adapter, CD-ROM with configuration tools and documentation, printed Quick Start Guide	225.00
515-SD1101002-01	SD1101002-01	Secure Serial Interface Dual DB9 RS232 DTE serial ports, 10Base-T/100Base-TX Ethernet, diagnostic LEDs, AC power adapter, CD-ROM with configuration tools and documentation, printed Quick Start Guide	259.00

CoBox® -FL - External Fiber Optic Device Servers

The CoBox-FL is the first Device Server to support fiber optic cabling. The CoBox-FL enables devices to connect to an Ethernet network over fiber optic medium. It provides exceptional functionality for users with IP applications requiring two serial ports.



Features:

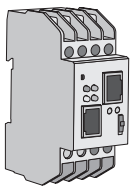
- Flexible, well-developed TCP/IP protocol support
- RJ45 (10BASE-T) and ST Multi-mode Fiber (10BASE-FL) Ethernet interfaces
- RS-232 and RS-485 serial connections via a DB-9 and a DB-25 serial ports
- Serial speeds up to 115Kbps supported
- Configurable via internal WEB server, serial port, and Telnet login
- 128-bit encryption for the maximum level of security
- Flash ROM for easy software upgrades

For quantities of 10 and up, call for quote.

515-COBOX-FL-11	COBOX-FL-11	1 DB9 (RS-232) serial port, 1 DB25 (RS232/485/422) serial port, 1 10-BASE-T (RJ45) plus 1 10-BASE-FL Ethernet port, FlashROM, CD-ROM with Device Comm Manager software, external Universal 100-240Volt AC.	574.00

XPress-DR - DIN Rail Mount Industrial Device Servers

Remotely configure, program, monitor, and manage: PLCs, Drives, Process Controls, Power Monitoring Equipment, Barcode Scanners, and other factory floor serial devices



RoHS Compliant

Features:

- Connect enterprise (ERP, MES) systems to factory floor devices without disturbing existing control networks
- Allow remote firmware upgrades, saving money and time from manual upgrades
- Includes industrial protocols MODBUS, TCP, MODUS ASCII/RTU, DFI
- Configurable serial interface supports RS-232, RS-422, or RS-485
- 10Base-T/100Base-TX Ethernet (RJ45)
- Isolated serial and Ethernet ports
- FM-approved for hazardous locations Class I, Div. 2

For quantities of 10 and up, call for quote.

515-XSDRIN-02	XSDRIN-02	Din Rail mounting, RS422/232/485, RJ45 plus screw terminal serial port, 10/100-BASE-T Ethernet networking port, Diagnostic LEDs, CD-ROM with configuration tools, installable industrial communication drivers.	425.00

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NETBURNER Embedded 32-bit Core Modules

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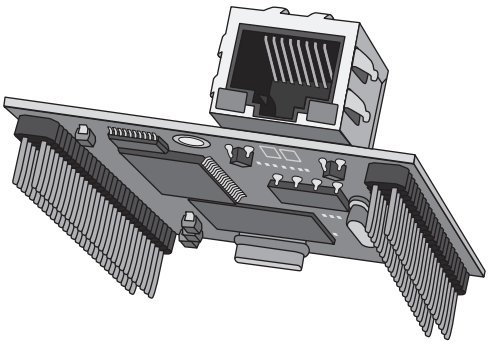
32-BIT 10/100 ETHERNET CORE PROCESSOR MODULES

The NetBurner core processor modules are devices containing everything needed for design engineers to add network control and to monitor a company's communications assets. For a very low price point, the modules solve the problem of network-enabling devices with 10/100 Ethernet, including those requiring digital, analog, and serial control.

Traditionally, companies using 8 and 16-bit platforms find it nearly impossible to run resource-intensive applications on fast Ethernet connections. The NetBurner modules feature a Web-based control interface, a full 32-bit architecture providing 60+ MIPS, and the full suite of TCP/IP protocols. The 32-bit high performance processing platform provides the horsepower to handle both, 10/100 Ethernet connections and resource demanding applications with ease and flexibility.

Custom Applications: Quickly and easily customize your specific application requirements using the NetBurner Network Development Kits.



Development Kit Contents:
- 32-bit Core Processor Module
- Development Board
- CD-ROM
- Network Cables
- Serial Cable
- 12 Volt Power Supply for US/Canada

RoHS Compliant

Feature:	MOD5270 Module	MOD5272 Module	MOD5282 Module
Processor:	32-bit Freescale ColdFire 5270 Module	32-bit Freescale ColdFire 5272 w/ integrated 10/100 Ethernet MAC	32-bit Freescale ColdFire 5282 w/ integrated 10/100 Ethernet MAC
Speed:	96MPS @ 100MHz	63MPS @ 66MHz	76MPS @ 80MHz
Network Interface:	10/100BaseT with RJ-45 Jack	10/100BaseT with RJ-45 Jack	10/100BaseT with RJ-45 Jack
Flash Memory:	512KB	2MB	512KB
SDRAM:	2MB	8MB	8MB
Power Requirements:	500mA @ 3.3V	500mA @ 3.3V	500mA @ 3.3V
PCB Connection:	2 sets of .100" 50-pin dual row headers	2 sets of .100" 50-pin dual row headers	2 sets of .100" 50-pin dual row headers
LEDs:	10/100 Ethernet Speed and Link/Activity	10/100 Ethernet Speed and Link/Activity	10/100 Ethernet Speed and Link/Activity
Peripherals:	Address bus 16-bit external data bus 22 General Purpose I/O Chip selects Interrupts 4 32-bit timers - 3 UARTs QSPI and I2C - - -	Address bus 16-bit external data bus 22 General Purpose I/O Chip selects Interrupts 4 timers 3 PWM Outputs 2 UARTs QSPI USB - -	Address bus 16-bit external data bus 50 General Purpose I/O Chip selects Interrupts 16 timers 3 PWM Outputs 3 UARTs QSPI and I2C CAN 12C 8 10-bit A/D Inputs
Dimensions:	2" X 2.6"	2" X 2.6"	2" X 2.6"

MOD5270 Module

MOUSER STOCK NO.	Netburner Part No.	Price Each 1	100	1000
820-MOD5270-100CR	MOD5270CR	79.00	69.00	59.00

MOD5270 Development Kit

MOUSER STOCK NO.	Netburner Part No.	Price Each
820-NNDK-MOD5270-KIT	NNDK-MOD5270-KIT	299.00

MOD5272 Module

MOUSER STOCK NO.	Netburner Part No.	Price Each 1	100	1000
820-MOD5272-100CR	MOD5272-100CR	139.00	99.00	72.00

MOD5272 Development Kit

MOUSER STOCK NO.	Netburner Part No.	Price Each
820-NNDK-MOD5272-KIT	NNDK-MOD5272-KIT	299.00

MOD5282 Module

MOUSER STOCK NO.	Netburner Part No.	Price Each 1	100	1000
820-MOD5282-100CR	MOD5282-100CR	145.00	105.00	78.00

MOD5282 Development Kit

MOUSER STOCK NO.	Netburner Part No.	Price Each
820-NNDK-MOD5282-KIT	NNDK-MOD5282-KIT	299.00

32 BIT MOD5213 HIGH PERFORMANCE EMBEDDED PROCESSOR MODULE

The Mod5213 has a rich set of peripherals making it ideal for both communications and control applications. This small form factor module is targeted at the high performance extended temperature low power market. Available in a 40 pin DIP, the Mod5213 boasts 66MHz of performance on a 32 bit ColdFire platform. The Mod5213 development kit also includes all the tools necessary to complete your embedded design, including a world class IDE, Graphical Debugger, and Real Time Operating System.

Process Specifications:
- 32-bit Freescale ColdFire 5213 running at 66MHz

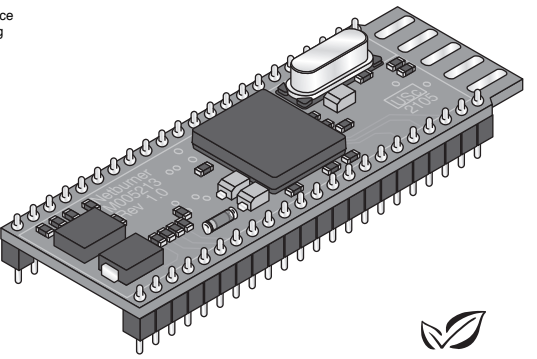
Hardware Specification:
- 32 KB SRAM
- 256 KB Flash
- MAC Module and HW Divide
- Low-power optimization
- Four 32-bit timer channels with DMA capability
- Four 16-bit timer channels with capture/compare/PWM
- 4-channel 16-bit/8-channel 8-bit PWM generator
- Two periodic interrupt timers (PITs)
- 4-channel DMA controller
- 8-channel 12-bit ADC
- Up to 33 general-purpose I/O
- System integration (PLL, SW watchdog)
- CAN 2.0B controller with 16 message buffers
- Three UARTs with DMA capability

Software Development:
- NetBurner Development Kit includes: Mod5213 Development Board, Real-Time OS, C/C++ Compiler, Integrated Development Environment (IDE), Graphical Debugger, configuration and deployment tools.

Connectors:
- Two standard single row 20-pin 0.1" headers
- PIN Dimensions: 1.9" x 0.6"

Physical Characteristics:
- Industry Standard 40-pin DIP
- Dimensions: 2.0" x 2.6"

Power Requirements:
- DC Input Voltage: 4V - 7V, or 3.3V Regulated
- Operating current: 120mA Environmental
- Operating Temperature: -40 - +85°C



RoHS Compliant

MOD5213 Development Kit
This Development kit contains all the hardware, software, and tools you need to start writing application code for your product or idea immediately. All components are integrated and ready to run so you don't waste any time configuring individual components.

The kit contains the NetBurner Mod5213 Processor Board. This processor board can be incorporated into your final product as a high performance main processor or as a low cost secondary processor.

The kit also contains the Mod5213 Development Board, which provides convenient DB-9 connectors, RS-232 and RS-485 level shifters, Segmented LED display, Real-Time Clock, dip switches, discrete LED's, CAN connector, 8 A/D inputs and filter locations, easy access connectors to processor signals, and a switching power supply.

MOD5213 Module

MOUSER STOCK NO.	Netburner Part No.	Price Each 1	100	1000
820-MOD5213-100CR	MOD5213-100CR	39.00	33.00	32.00

MOD5213Development Kit

MOUSER STOCK NO.	Netburner Part No.	Price Each
820-NNDK-MOD5213-KIT	NNDK-MOD5213-KIT	99.00

NETBURNER Serial-to-Ethernet Modules

Products may be RoHS compliant.
Check mouser.com for RoHS status.

32-BIT SERIAL-TO-ETHERNET PROCESSOR BOARDS

If your application requires TTL level serial ports, just plug in the SB70 and go! If you require RS-232, RS-422 or RS-485, please see the SB72 Ethernet to Serial Processor Board.

SB70 Processor Board

The NetBurner SB70 is designed for applications that require a high performance/low cost 10/100 Ethernet interface to serial devices. The SB70 come preloaded with software to translate serial and Ethernet data, and is configurable through any web browser. The SB70 application code can be customized to any specific application requirements with the NetBurner Network Development Kit.

SB70 Features:

- Instantly allows any serial device to communicate over a network or the Internet
- The SB70 can be used a single board computer for custom applications.
- Includes TCP/IP, Telnet, SNMP, and Web Server (HTTP)
- Supports TTL, and QSPI* serial devices
- Web page configuration
- Powerful 32-bit Motorola ColdFire processor with integrated 10/100 Ethernet MAC
- Development kit required for QSPI

Development Kit Contents:

- SBXX Processor Board
- Adapter board to assist in development. It is not required to operate. The adapter board includes a switching power supply, RS-232 level shifters and two DB-9 connectors.
- CD-ROM containing source code, development tools, manuals and documentation.

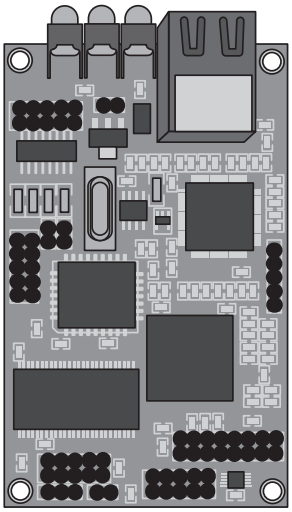
SB72 Processor Board

The NetBurner SB72 is designed for applications that require a high performance/low cost 10/100 Ethernet interface to serial devices. The SB72 come preloaded with software to translate serial and Ethernet data, and is configurable through any web browser. The SB72 application code can be customized to any specific application requirements with the NetBurner Network Development Kit. The SB72 is similar to the SB70, with the addition of RS-232 and RS-485 level shifters.

SB72 Features:

- Instantly allows any serial device to communicate over a network or the Internet
- The SB72 can be used a single board computer for custom applications.
- Includes TCP/IP, Telnet, SNMP, and Web Server (HTTP)
- Supports RS-232, RS-485/422, TTL, and QSPI* serial devices
- Web page configuration
- Powerful 32-bit Motorola ColdFire processor with integrated 10/100 Ethernet MAC
- Development kit required for QSPI

- Cross-wired and straight-through twisted pair network cables
- Serial cable
- 12 VDC power supply (US and Canada only)



RoHS Compliant

Feature:	SB70 Processor Board	SB72 Processor Board
Processor:	32-bit Freescale ColdFire 5270 with integrated 10/100 Ethernet MAC	32-bit Freescale ColdFire 5272 with integrated 10/100 Ethernet MAC
Speed:	145MPS @ 150MHz	63MPS @ 66MHz
Network Interface:	10/100BaseT with RJ-45 Jack	10/100BaseT with RJ-45 Jack
Serial Ports Supported:	– – –	RS-232, RS-422, RS-485, TTL.
Flash Memory:	512KB	512KB
SDRAM:	2MB	8MB
Power Requirements:	480mA @ 5V	480mA @ 5V
LEDs:	Link, Speed/Data, Power	Link, Speed/Data, Power
Network Protocols:	ARP, DHCP, BOOTP, TCP, UDP, ICMP, Telnet, HTTP, SNMP	ARP, DHCP, BOOTP, TCP, UDP, ICMP, Telnet, HTTP, SNMP
Dimensions:	3.25" X 2"	3.25" X 2"

SB70 Processor Board

MOUSER STOCK NO.	Netburner Part No.	Price Each 1	100	1000
820-SB70-100CR	SB70-100CR	79.00	69.00	59.00

SB70 Development Kit

MOUSER STOCK NO.	Netburner Part No.	Price Each
820-NNDK-SB70-KIT	NNDK-SB70-KIT	99.00

SB72 Processor Board

MOUSER STOCK NO.	Netburner Part No.	Price Each 1	100	1000
820-SB72-300CR	SB72-300CR	139.00	99.00	89.00

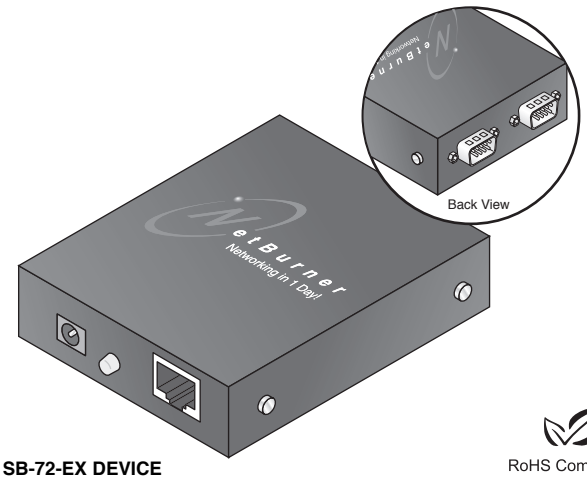
MOD72 Development Kit

MOUSER STOCK NO.	Netburner Part No.	Price Each
820-NNDK-SB72-KIT	NNDK-SB72-KIT	149.00

SB72-EX DUAL PORT SERIAL-TO-ETHERNET EXTERNAL DEVICE

SB72-EX to Network-Enable Existing Applications:

The SB72-EX network-enables serial devices right out of the box. No programming or development is required; the SB72-EX is pre-programmed to convert RS-232, RS-422, RS-485, and TTL data to Ethernet, enabling communication with the serial device over a network or the Internet. The onboard web server provides easy device configuration using a standard web server.



Hardware Specifications:

- 10/100BaseT with RJ-45 connector
- 32-bit Motorola ColdFire 5272 with integrated 10/100 Ethernet
- 2MBytes flash, 8MBytes of SDRAM
- Power: 12V, 500mA
- Operating Temperature: 0° to 70°C
- Dimensions: 4.2" x 3.0"
- Weight 5 oz
- UL and CUL approvals
- LED's: Link, Speed/Data, Power
- The 2 UARTS can be configured:
  Two RS-232 ports
  One RS-232 port, one RS-485/422 port (full or half duplex)

Software Specifications:

- Configuration through web browser, telnet, SNMP, or NetBurner IP Setup utility
- Password protection
- Firmware updates through network or serial connections

Network Protocols Supported:

- ARP, DHCP, BOOTP, TCP, UDP, ICMP, Telnet, HTTP, SNMP

Note: additional protocols supported with development kit.

RoHS Compliant

SB-72-EX DEVICE

MOUSER STOCK NO.	Netburner Part No.	Price Each 1	100	1000
820-SB72-EX-100CR	SB72-EX-100CR	179.00	138.00	119.00

Development Kit

The SB72-EX Network Development kit contains everything you need to create custom applications on your SB72-EX device: Real-time operating system, TCP/IP Stack, Web Server, C/C++ compiler and linker, Integrated Development Environment (IDE), Debugger, and product deployment tools.

Development Kit Contents:

- SB72-EX Device Box
- CD-ROM containing source code, development tools, manuals, and documentation
- Cross-wired and straight-through twisted pair network cables
- Serial cable
- 12 VDC power supply (US and Canada only)

SB-72-EX DEVICE DEVELOPMENT KIT

MOUSER STOCK NO.	Netburner Part No.	Price Each
820-NNDK-SB72EX-KIT	NNDK-SB72EX-KIT	299.00

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PARALLAX BASIC Stamp Modules and Accessories

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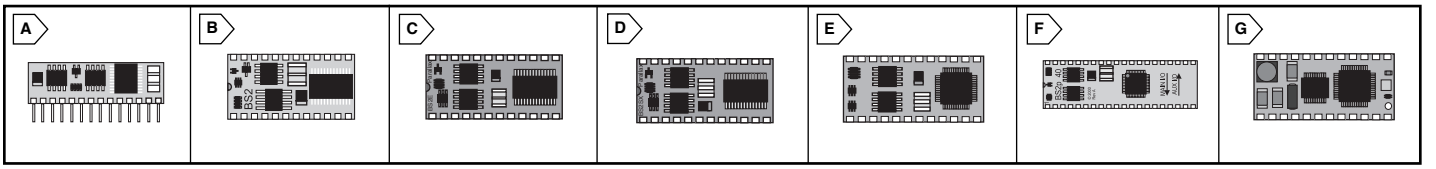
BASIC STAMP MODULES

BASIC Stamps are small computers with 8 or 16 I/O lines that can be connected to TTL level devices and also, with a few extra components, solenoids, relays, and RS232 networks. Their simple language and easy interfacing make BASIC Stamps ideal for many applications for industrial, educational, and hobbyist customers. BASIC Stamps require only editor software, a prototype area, and cable to get started. Each BASIC Stamp has on board it's own non-volatile EEPROM, voltage regulator, resonator, and microcontroller.



• Operating Temperature at 70% Non-Condensing Humidity: 0°C to +70°C

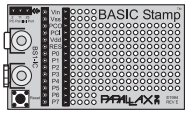
† Plus 2 Dedicated Serial I/O Pins

For quantities of 100 and up, call for quote.

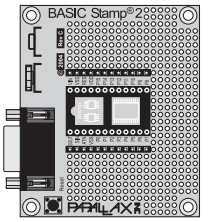
MOUSER STOCK NO.	Parallax Part No.	Fig.	Package	Microcontroller	EEPROM Size (Bytes)	Speed	I/O Pins	PBASIC Commands	Interface (Port)	Operating Voltage	Price Each 1	10	25
619-BS1-IC	BS1-IC	A	SIP-14	Microchip PIC16C56c	256	4 MHz	8	32	Parallel	5 - 15 VDC	27.00	23.10	21.09
619-BS2-IC	BS2-IC	B	DIP-24	Microchip PIC16C57c	2K	20 MHz	16 †	36	Serial	5 - 15 VDC	49.00	44.10	41.65
619-BS2E-IC	BS2E-IC	C	DIP-24	Ubicom SX28AC	8 X 2K	20 MHz	16 †	39	Serial	5 - 12 VDC	54.00	48.60	45.90
619-BS2SX-IC	BS2SX-IC	D	DIP-24	Ubicom SX28AC	8 X 2K	50 MHz	16 †	39	Serial	5 - 12 VDC	59.00	53.10	50.15
619-BS2P24-IC	BS2P24-IC	E	DIP-24	Ubicom SX48AC	8 X 2K	20 MHz Turbo	16 †	55	Serial	5 - 12 VDC	79.00	71.10	67.15
619-BS2PX-IC	BS2PX-IC	E	DIP-24	Ubicom SX48AC	8 x 2K	32 MHz Turbo	16 †	63	Serial	5 - 12 VDC	79.00	71.10	67.15
619-BS2P40-IC	BS2P40-IC	F	DIP-40	Ubicom SX48AC	8 X 2K	20 MHz Turbo	32 †	55	Serial	5 - 12 VDC	79.00	71.10	67.15
619-JS1-IC	JS1-IC	G	DIP-24	Ubicom SX48BD	32768	25 MHz Turbo	16	0 (Java)	Serial	6 - 24VDC (unreg)	89.00	80.10	77.21

BASIC STAMP CARRIER BOARDS

BASIC Stamp Carrier Boards make it easier to program and prototype BASIC Stamp Modules.



619-BS1-CB

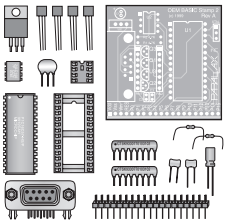


619-BS2-CB

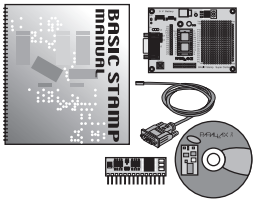
For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Parallax Part No.	Description	Price Each
619-BS1-CB	27110	Prototyping area, 9V batt clips, I/O header, reset button,	15.00
619-BS2-CB	27120	and programming connector.	24.00

BASIC STAMP KITS



619-27291



619-BS1-SK

For quantities of 10 and up, call for quote.

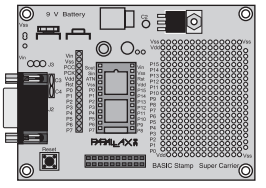
MOUSER STOCK NO.	Parallax Part No.	Description	Price Each
619-27291	27291	Through Hole Kit of the Basic Stamp Model 2	45.00
619-BS1-SK	27205	BS1-IC, 27100, Manual, Software, and cable for BS1-IC	79.00

BASIC STAMP SUPER CARRIER BOARD

The Super Carrier provides wire-wrap prototyping space and holes placed to accommodate DIP ICs. The Super Carrier supports the BS1-IC, BS2-IC, BS2E-IC, BS2SX-IC, and BS2P 24 pin modules.

Features:

- 3" x 4" Double-sided plated through-hole prototype board
- Sockets support BS1-IC and all 24 pin BS2 modules
- On-board voltage regulator accepts 6-30 VDC, from wall-pack or battery
- Serial programming port (D89) can be used for run-time communication (BS2-IC and BS2SX-IC)
- Prototype area (1.5" x 2.0") holes arranged to easily support: servos, 300 and 600 mil DIP ICs, D89, DB25, RJ-11 connectors
- AppMod header
- Size measures 7.7 x 10.2cm (3" x 4")



For quantities of 10 and up, call for quote.

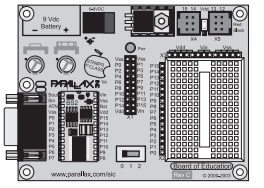
MOUSER STOCK NO.	Parallax Part No.	Description	Price Each
619-27130	27130	Carrier Board for Stamp Modules	19.95

BOARD OF EDUCATION - SERIAL VERSION

The Board of Education was designed in coordination with educational customers to each microcontroller interfacing and programming. It is a quick platform for building a circuit without requiring soldering or wire wrapping tools.

Features:

- Mechanically interlocked power supply to prevent dual connection of wall pack and 9V battery.
- DB9 connector for BS2-IC programming and serial communication during run time.
- Female 10 pin dual row connector for optional AppModules (more breadboard space)

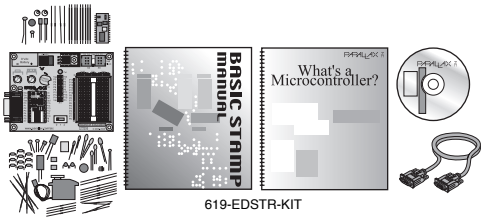


For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Parallax Part No.	Description	Price Each
619-BRDOFEDU	28150	Board of Education	65.00
619-28103	28103	Board of Education Full Kit, No Power Supply	119.00

BS2 EDUCATIONAL STARTER KITS

The "What's a Microcontroller?" text is a beginner's introduction to microcontroller interfacing. Over 40 Activities designed to provide the customer with the best possible introduction to the world of BASIC Stamps.



619-EDSTR-KIT

For quantities of 10 and up, call for quote.

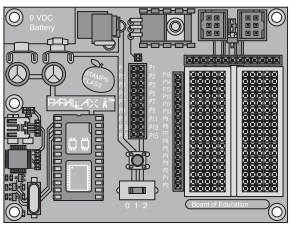
MOUSER STOCK NO.	Parallax Part No.	Description	Price Each
619-EDSTR-KIT	27207	BASIC Stamp Discovery Kit - Serial	149.00
619-27807	27807	Basic Stamp Discovery Kit - USB	149.00
619-MICRO-TXT	28123	"What's a Microcontroller?" Student Guide	27.00
619-MICRO-KIT	28122	Parts Kit for "What's a Microcontroller"	36.00

BOARD OF EDUCATION - USB VERSION

The Board of Education was designed in coordination with educational customers to each microcontroller interfacing and programming. It is a quick platform for building a circuit without requiring soldering or wire wrapping tools.

Features:

- USB connector for BS2-IC programming
- P0 - P15 I/O pins, Vdd and Vss connections brought adjacent to 5.1 x 3.5 cm (2" x 1 3/8") breadboard area
- Includes set of ten (10) color-coded 22 gauge wires
- Female 10 pin dual row connector for optional AppModules (more breadboard space)



For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Parallax Part No.	Description	Price Each
619-28803	28803	Board of Education Full Kit, No Power Supply	119.00

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PARALLAX Accessories and FPGA Development Tools

Products may be RoHS compliant.
Check mouser.com for RoHS status.

BASIC STAMP EMBEDDEDBLUE TRANSCEIVER APPMOD

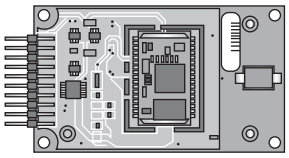
The EmbeddedBlue Transceiver AppMod provides standard Bluetooth connectivity for BASIC Stamp applications without the need for detailed Bluetooth knowledge.

Specifications:

- Frequency: 2.4GHz FHSS
- Transmit Power: 4dBm (max) class 2 operation
- Open Field Range: 300 feet
- Bluetooth: Compliant with the v1.1 standard
- Receiver sensitivity at 0.1% BER: -85dBm

Features:

- Integrates with BASIC Stamp 2 Series
- Seamless connection with Bluetooth devices
- Perfect for wireless cable replacement

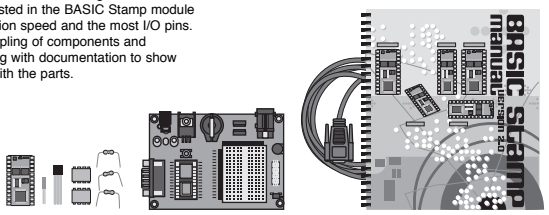


For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Parallax Part No.	Description	Price Each
619-30068	30068	Bluetooth Transceiver for Basic Stamp	99.00
619-30069	30069	PC (RS232) Adapter for 619-30068	99.00

PARALLAX BASIC STAMP 2P40 STARTER KIT

BS2p40 Professional Starter Kit is designed for the customer that is interested in the BASIC Stamp module with the fastest execution speed and the most I/O pins. The kit includes a sampling of components and integrated circuits along with documentation to show you how to interface with the parts.



For quantities of 10 and up, call for quote.

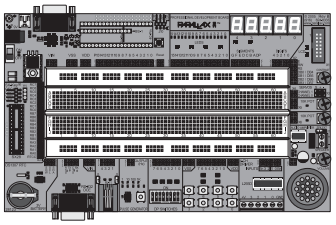
MOUSER STOCK NO.	Parallax Part No.	Description	Price Each
619-27238	27238	Project Board, parts, manual, Serial Cable	199.95

PROFESSIONAL DEVELOPMENT BOARD

The Parallax Professional Development Board (PDB) is high-quality, fully-integrated development platform for BASIC Stamp®, Javelin Stamp, and Ubicom® SX28AC/DP microcontrollers.

Features:

- 40-pin DIP socket (for all BASIC Stamp 24/40-pin and Javelin Stamp modules)
- 14-pin SIP socket (for BS1-IC)
- 28-pin "skinny" DIP socket (for SX28AC/DP)
- USB, DB-9, BS1, and SX-Key programming connectors
- 5 volt, 1.0 amp power-supply with power switch
- Five blue 7-segment (with decimal point), common-cathode LED displays
- Parallel LCD (available separately) may be configured in 4-bit or 8-bit mode
- Two servo-compatible headers
- Two 10k Ohm potentiometers
- L293D high-current driver for motors, solenoids, etc.
- Eight, normally-open pushbuttons (I/O lines protected, and pulled-up to Vdd via 10K)
- Pulse generator with selectable frequency (1 Hz, 10 Hz, 100 Hz, or 1 kHz)
- RS-232 DCE port with MAX232E transceiver



For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Parallax Part No.	Description	Price Each
619-28138	28138	Professional Development Board	149.00

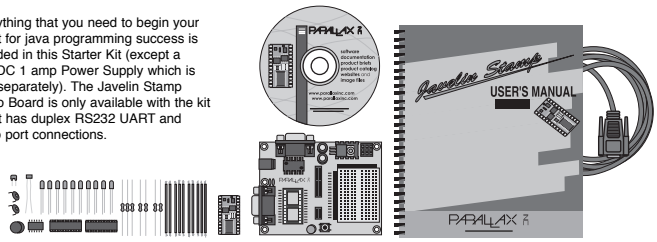
BASIC STAMP ACCESSORIES

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Parallax Part No.	Description	Price Each
619-BS1USB	BS1USB	BS1 USB Board - USB-A Connection BS1 Module	39.95
619-27924	27924	Taos TSL230 Light to Frequency Converter	4.75
619-28015	28015	Ping))) Ultrasonic Sensor	49.92
619-570-28015	570-28015	Ping))) Mounting Bracket	14.95
619-28017	28017	Memsic Accelerometer (Dual Axis)	29.00
619-28018	28018	Sensirion Temperature/Humidity Sensor	29.00
619-28026	28026	Hitachi H48C 3-Axis Accelerometer	39.00
619-28130	28130	AD592 Temp Probe	16.61
619-29123	29123	Hitachi HM55B Compass Module	39.94
619-30010	30010	BASIC Stamp Logic Analyzer	79.00
619-30056	30056	FlexiForce Sensor	25.00
619-350-00009	350-00009	Photoresistor	1.95
619-555-28027	555-28027	PIR Motion Sensor	7.95
619-27970	27970	112 x 16 Serial Graphic VFD Display	70.00
619-27976	27976	Serial LCD - Parallax 2 x 16 Non-backlit	29.95
619-27977	27977	Serial LCD - Parallax 2 x 16 Backlit	34.95
619-27979	27979	Serial LCD - Parallax 4 x 20 Backlit	39.95
619-30006	30006	Emic TTS SIP Text to Speech Module (Female Voice)	79.00
619-30057	30057	Serial LCD - Matrix Orbital 2x20 Backlit	79.95
619-30058	30058	Serial LCD - Matrix Orbital 4x20 Backlit	99.95

JAVELIN STAMP STARTER KIT

Everything that you need to begin your quest for java programming success is included in this Starter Kit (except a 7.5VDC 1 amp Power Supply which is sold separately). The Javelin Stamp Demo Board is only available with the kit and it has duplex RS232 UART and servo port connections.

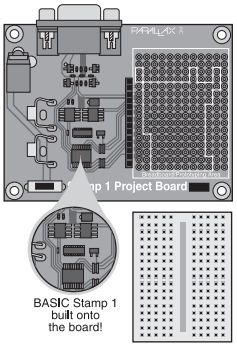


For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Parallax Part No.	Description	Price Each
619-27237	27237	Project Board, parts, manual, Serial Cable	239.00

BASIC STAMP 1 PROJECT BOARD

For students, hobbyists, and professionals who desire the small form and features of the BASIC Stamp 1 microcontroller, but need a development platform in the mold of the Parallax BOE and HomeWork boards, the BASIC Stamp 1 Project Board is low-cost solution that is sure to fit the bill.

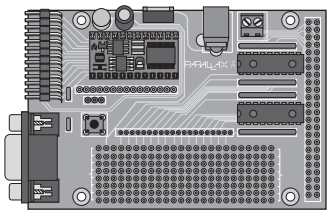


For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Parallax Part No.	Description	Price Each
619-27112	27112	Project Board with built in BASIC Stamp	29.00

STAMP CONTROLLER INTERFACE BOARD

The Stamp Controller Interface allows the BASIC Stamp® microcontroller to connect directly to industrial type digital I/O control boards produced by Opto22, Grayhill, Allen-Bradley, and others that accept 0-5 VDC voltage control levels. These optically isolated modules are ideal for interfacing microcontrollers to the real world, and are more reliable by providing proper isolation. The Stamp Controller Interface accepts all BASIC Stamp modules. A 9-12 VDC, 2.1 mm jack is included for external power supply (sold separately).

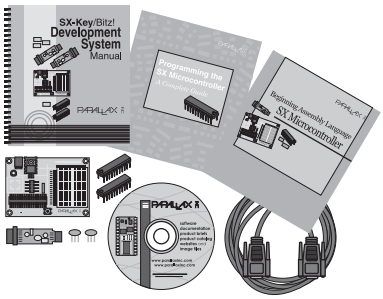


For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Parallax Part No.	Description	Price Each
619-27945	27945	Project Board accepts all BASIC Stamps	69.00

SX TECH TOOL KIT PLUS

This kit is the most complete SX-Key programming tool package offered by Parallax, and the most complete starting point with everything you'll need except for a power supply (sold separately). Pull the contents out of the box and program SX chips within the hour. International customers order #45180 to reduce shipping costs.



For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Parallax Part No.	Description	Price Each
619-45181	45181	Project Board, parts, manual, Serial Cable	99.00

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RABBIT Microprocessors, Core Modules and Dev. Kits

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RABBIT 2000™ MICROPROCESSOR (30 MHZ)

The Rabbit 2000™ is a high-performance 8-bit microprocessor designed expressly to power a new generation of embedded systems. Its extensive integrated feature set and glueless architecture facilitate rapid hardware design, and its C-friendly instruction set permits efficient development of complex applications. For embedded systems, the Rabbit 2000 out-performs most 16 and some 32-bit processors without losing the efficiency of an 8-bit architecture. With clock speeds of up to 30 MHz and numerous on-chip peripherals including memory and I/O control signals for glueless interface, four serial ports, over forty digital I/O pins, 8 and 10-bit timer systems, watchdog timer, real-time clock and flexible clocking options, the Rabbit 2000 packs a hardware punch that system designers will appreciate. Our Dynamic C® development environment provides an integrated C compiler with debugger and linker for efficient and powerful applications development.

Design Advantages:

- 8-Bit Architecture
  High-performance architecture with integrated peripherals permit efficient and cost effective hardware design.
- Enhanced Instruction Set
  Brings new power and speed to 8-bit systems with numerous one-byte opcodes and 16-bit logical, arithmetic, and data transfer instructions.
- Exceptional Math Performance
  Based on highly optimized math libraries.
- Dynamic C® Development Environment
  For real-time development and debugging of Rabbit-based systems using C or Assembly language.
- TCP/IP Connectivity
  Full TCP/IP stack with source code is provided royalty free in Dynamic C.

Feature List:

- On-board slave port allows the Rabbit to be configured as an intelligent peripheral device.
- Control of clock speed by software allows dynamic trading of power vs. speed.
- Excellent math performance with 16 x 16 multiply in 12 clocks.
- Three levels of interrupt priority allow fast response to real-time events.
- 40 parallel I/O lines.
- 4 serial ports
- Five 8-bit timers and one 10-bit timer with two match registers
- Battery-backable time/date clock
- Watchdog Timers

✻ Software available à la carte. See www.mouser.com/rabbitsemi **For quantities of 500 and up, call for quote.**

MOUSER STOCK NO.		Package	Price Each			
Mfr.	Mfr. Part No.		1	25	100	250
669—20-668-0003		PQFP-100 (Lead Free)	13.81	13.08	12.77	12.25

MOUSER STOCK NO.		Description	Price Each
Mfr.	Mfr. Part No.		
694—101-0398		RCM2000 Development Kits	169.00
694—101-0475		RCM2200 Development Kits	239.00
694—101-0480		RCM2300 Development Kits	199.00

Available Options and Accessories

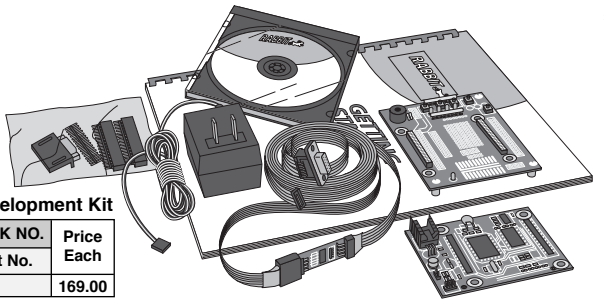
694—101-0403	TCP/IP Tool Kit	99.00
694—101-0589	Rabbit Cloning Board	89.00
694—20-101-0467	8MB Serial Flash Expansion Boards	119.00

RCM2000 RABBIT 2000™ DEVELOPMENT KIT

The RCM2000/Rabbit 2000 Development Kit includes a core module (model RCM2020 with Rabbit 2000® microprocessor, flash, SRAM, serial ports, digital I/O), Dynamic C® SE development software and documentation on CD-ROM (not a trial version!), prototyping board, power supply and serial programming cable. The RabbitCore 2000 is the foundation around which you can build a custom board based on the Rabbit 2000 microprocessor. It includes all the components that will jump-start your board design; general-purpose I/O, memory I/O interface, battery backup interface, master-slave control pins, five 8-bit timers (cascadable in pairs) and one 10-bit timer with two match registers, four CMOS-compatible serial ports, and up to 25.8MHz (see versions) clock for fast number crunching. Flash and SRAM are on-board, providing a development-ready memory interface.

Development Software:

The RCM2000/Rabbit 2000 Development Kit is ready for immediate software development. User programs are created using Dynamic C® SE a C language environment that includes an editor, compiler and debugger. Dynamic C SE is an enhanced version of the industry standard C programming language that is specifically tailored for control and embedded systems. Dynamic C SE includes Fast Fourier Transform functions, supports up to one megabyte of code and data and includes software drivers specific for the development kit. Programs can be compiled and executed using the Dynamic C software and a serial programming cable. No in-circuit emulator is required.



RCM 2000 Development Kit

MOUSER STOCK NO.		Price Each
Mfr.	Mfr. Part No.	
694—101-0398		169.00

✻ Software available à la carte. See www.mouser.com/rabbitsemi

MOUSER STOCK NO.		Description	Price Each
Mfr.	Mfr. Part No.		
694—20-101-0404		RCM 2000 Core - 25.8 MHz, 512K SRAM	69.00
694—20-101-0405		RCM 2010 Core - 25.8 MHz, 128K SRAM	49.00
694—20-101-0383		RCM 2020 Core - 18.4 MHz, 128K SRAM	39.00

Available Options and Accessories

694—101-0417	RabbitLink Card	129.00
694—101-0589	Rabbit Cloning Board	89.00
694—20-101-0467	8MB Serial Flash Expansion Board	119.00
694—540-0070	RS-232-to-USB Converter Cable	39.00

RCM2200 RABBIT 2000™ DEVELOPMENT KIT

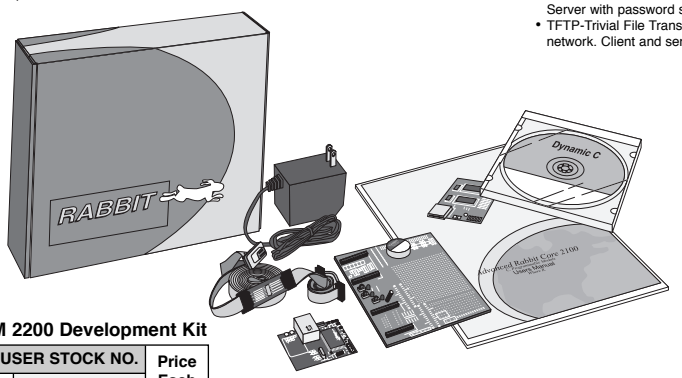
Jump start your design efforts with our most compact Ethernet core module. The RCM2200/Rabbit 2000 Development Kit includes a RCM2200 RabbitCore (with a Rabbit 2000® microprocessor with 22.1 MHz clock, 256K flash memory, 128K SRAM, Ethernet and serial ports, and digital I/O), prototyping board, power supply (U.S. sales only), Dynamic C® SE development software with TCP/IP stack and documentation on CD-ROM (not a trial version!), a PC serial cable, and a Getting Started manual. The RabbitCore RCM2200 is the foundation around which you can build a custom board based on the Rabbit 2000 microprocessor. It includes all the components that you need for fast and easy board design-26 parallel I/O lines, a memory-I/O interface, a battery-backup interface, master/slave control pins, five 8-bit timers (cascadable in pairs) and one 10-bit timer with two match registers, and four CMOS-compatible serial ports. Flash and SRAM are on-board and provide a development-ready memory interface. Full TCP/IP source code is provided in addition to the Dynamic C software on CDROM. ICMP, HTTP (includes facilities for SSI, CGI routines, cookies, and basic authentication), SMTP, FTP and TFTP (client and server) capabilities are provided. Ethernet drivers for the RealTek Ethernet chip are also included. Users can directly write to TCP or UDP sockets to develop custom applications. In addition, extensive demo programs are provided to assist with development. No run-time royalties are required, saving OEMs significant cost over the life of their application.

Key Benefits:

- Ethernet ready-port to an Ethernet chip is done for the Rabbit 2000 chip.
- Cost-effective-no run-time royalties.
- Simplified development-a complete Dynamic C® SE software package (with integrated editor, compiler and debugger) is provided. No in-circuit emulator required!
- A head start-sample demo programs, including HTTP web server and SMTP mail client, provide an advanced starting point for development.
- Quick development time-full hardware reference schematics help reduce development efforts.

TCP/IP Capability:

- Socket Level TCP-Transmission Control Protocol. Provides reliable full-duplex data transmission.
- Socket Level UDP-User Datagram Protocol. Simple protocol that exchanges datagrams without acknowledgements or guaranteed delivery.
- ICMP-Internet Control Message Protocol. Network layer Internet protocol reports errors and provides information relevant to IP packet processing.
- HTTP-Hypertext Transfer Protocol. The protocol used by Web browsers and Web servers to transfer files, such as text and graphic files. Includes facilities for Server Side Includes (SSI) and CGI routines.
- SMTP-Simple Mail Transfer Protocol. Internet protocol providing e-mail services.
- FTP-File Transfer Protocol. Application protocol, part of the TCP/IP protocol stack, used for transferring files between network nodes. Server with password support for file transfers between network nodes available on Rabbit 2000.
- TFTP-Trivial File Transfer Protocol. Simplified version of FTP that allows files to be transferred from one computer to another over a network. Client and server available on Rabbit 2000.



RCM 2200 Development Kit

MOUSER STOCK NO.		Price Each
Mfr.	Mfr. Part No.	
694—101-0475		239.00

✻ Software available à la carte. See www.mouser.com/rabbitsemi

MOUSER STOCK NO.		Description	Price Each
Mfr.	Mfr. Part No.		
694—20-101-0454		RCM 2200 Core - 256K Flash, 128K SRAM, RJ-45	55.00
694—20-101-0488		RCM 2210 Core - 256K Flash, 128K SRAM	49.00
694—20-101-0494		RCM 2250 Core - 512K Flash, 512K SRAM, RJ-45	79.00

Available Options and Accessories

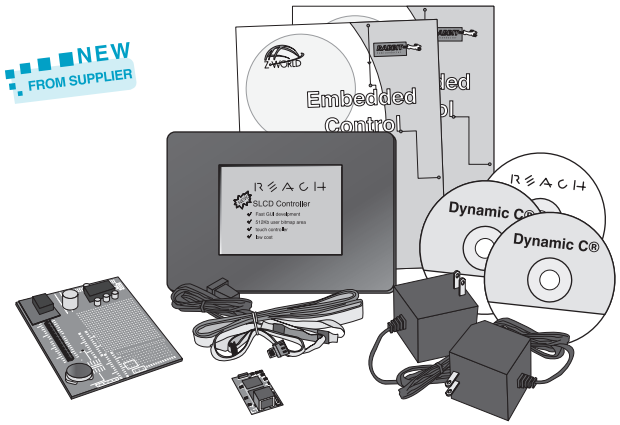
694—101-0403	TCP/IP Tool Kit	99.00
694—101-0417	RabbitLink Card	129.00
694—101-0589	Rabbit Cloning Board	89.00
694—101-0467	8MB Serial Flash Expansion Board	119.00
694—540-0070	RS-232-to-USB Converter Cable	39.00
694—151-0113	Connector Adapter Board	15.00

RABBIT Core Modules and Development Kits

Products may be RoHS compliant.
Check mouser.com for RoHS status.

COLOR TOUCHSCREEN APPLICATION KIT - CONTROL AT YOUR FINGER TIPS

The Reach Technology Color Touchscreen with a RabbitCore creates an application kit that provides embedded systems integrators the ability to add advanced interface functionality to embedded systems. Color touchscreens provide real-time feedback, allowing for better control in industrial-automation applications.
Controller and TFT Color Touch Screen The Reach Technology SLCD controller allows an LCD graphic display to be accessed as an intelligent serial device. Text can be written to the display and graphic images shown by using high-level commands. The touchscreen interface enables buttons to be defined on-screen and return a serial string when touched. User-defined bitmaps provide a modern looking interface including tabbed document interface pages and many different types of controls, such as radio buttons and check boxes.



Key Features

- RCM3720 RabbitCoreTM
- Rabbit 3000 @ 22.1 MHz
- 512K Flash / 256K SRAM
- 10Base-T Ethernet, RJ-45 port
- 33 digital I/O, alternate I/O bus
- 4 serial ports
- 3.3 V (with 5 V-tolerant I/O)
- Small footprint
- Rugged, industrial enclosure
- Audible beeper for audible touch feedback and alarms
- 5.7" TFT Hitachi Display
- Waterproof NEMA 4 compliant steel enclosure.
- Supports user-created bitmaps with RLE compression (512K of flash memory)
- Backlight enable and brightness control

Color Touchscreen Application Kit includes:

- RCM3720 RabbitCore with Proto Board
- Reach Technology SLCD Graphics
- Touch Terminal with NEMA 4 steel enclosure
- Supplemental CD's
- Dynamic C development system and complete documentation on CD-ROM
- User manuals, sample programs, and libraries
- 5 serial and conversion cables .
- Two AC adapters (U.S./Canada only)

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.		Description	Price Each
Mfr.	Mfr. Part No.		
694—101-1062		Color Touchscreen Application Kit	899.00

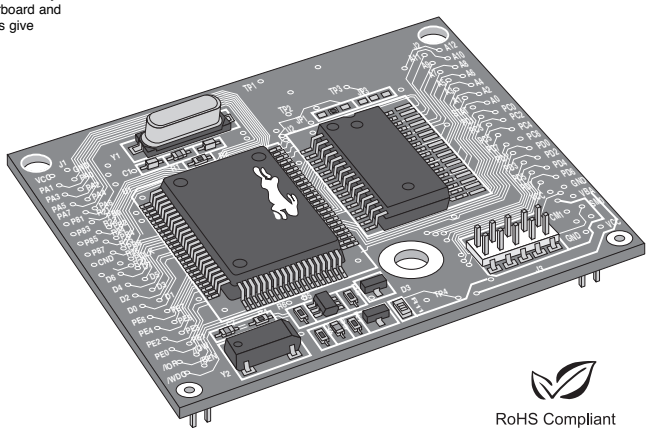
RCM2000 RABBITCORE MICROPROCESSOR MODULES (25.8MHZ)

Measuring just 2.30" x 1.90" (58 x 48 mm), the RCM2000 RabbitCore is a compact and powerful microprocessor core module that has all the components needed to jumpstart your board design. The RCM2000 comes in three available models and includes 40 general-purpose I/O, 4 CMOS-compatible serial ports, five 8-bit timers and one 10-bit timer with two match registers, and a fast number-crunching clock. Flash and SRAM are onboard, providing a development-ready memory interface.

Designing with RabbitCores:

The RabbitCore family of microprocessor core modules is designed to facilitate rapid development and implementation of embedded systems. RabbitCores are powered by high-performance 8-bit Rabbit microprocessors with extensive integrated features and a C-friendly instruction set designed for use with the Dynamic C® development system. The RabbitCore mounts on a user-designed motherboard and acts as the controlling microprocessor for the user's system. Small in size but packed with powerful features, these core modules give designers a complete package for control and communication.

Feature:	RCM2000	RCM2010	RCM2020
Microprocessor	Rabbit 2000 at 25.8 MHz		Rabbit 2000 a 18.432 MHz
Flash	256K		
SRAM	512K	128K	
Backup Battery	Connection for user-supplied battery (to support RTC and SRAM)		
General Purpose I/O	40 parallel I/O include: •26 configurable I/O • 8 fixed inputs • 6 fixed outputs (grouped in five 8-bit ports and shared with serial ports)		
Additional Inputs	2 Startup Mode, Reset In		
Additional Outputs	Watchdog, Reset Out		
Memory I/O	13 address, 8 data, I/O Read-Write, Buffer Enable, Status, Clock		
Serial Ports	Four 5 V CMOS-compatible, 2 configurable as clocked ports		
Serial Rate	Max. burst rate = CLK/32, Max. sustained rate = burst/2		
Connectors	Two 2 x 20, 2 mm IDC headers		
Slave Interface	Slave port permits use as master or intelligent peripheral with Rabbit-based or other master controller		
Real-Time Clock	Yes		
Timers	Five 8-bit timers (four cascadable from the first) and one 10-bit timer with 2 match registers		
Watchdog/ Supervisor	Yes		
Power	4.75–5.25 V DC, 130 mA		4.75–5.25 V DC, 98 mA
Operating Temp.	–40°C to +85°C		
Humidity	5–95%, non-condensing		
Board Size	2.3" x 1.9" x 0.5" (58 x 48 x 13 mm)		



RoHS Compliant

✻ Software available à la carte. See www.mouser.com/rabbitsemi

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.		Description	Price Each	
Mfr.	Mfr. Part No.		1	10
694—20-101-0404		RCM2000 RabbitCore Module - RoHS	69.00	55.00
694—20-101-0405		RCM2010 RabbitCore Module - RoHS	49.00	47.65
694—20-101-0383		RCM2020 RabbitCore Module - RoHS	39.00	31.00

Available Options and Accessories

MOUSER STOCK NO.		Description	Price Each
Mfr.	Mfr. Part No.		
694—101-0417		RabbitLink Card	129.00
694—101-0589		Rabbit Cloning Board	89.00
694—101-0467		8MB Serial Flash Expansion Board	119.00
694—540-0070		RS-232-to-USB Converter Cable	39.00
694—151-0113		Connector Adapter Board	15.00

Development Kit

MOUSER STOCK NO.		Description	Price Each
Mfr.	Mfr. Part No.		
694—101-0398		RCM2000 Development Kit	169.00

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RABBIT Microprocessor Core Modules

Products may be RoHS compliant.
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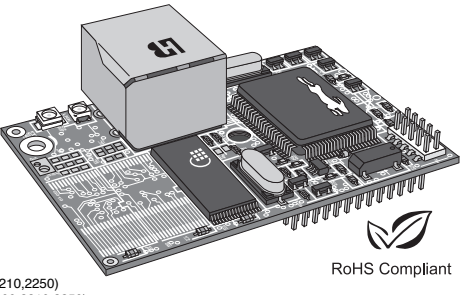
RCM2200 RABBITCORE MICROPROCESSOR MODULES (22.1MHZ)

Our award-winning Ethernet-enabled RCM2200 RabbitCore microprocessor core module is a compact yet powerful embedded control solution for application developers working with a small design footprint. Only half the size of a credit card, the RCM2200 features the powerful Rabbit 2000® microprocessor, 256K of Flash memory, 128K of SRAM, 4 serial ports, 26 I/O, real-time clock, and integrated Ethernet. (To permit parallel development and cost-effective implementation of both Ethernet-enabled and non-Ethernet systems, our pin-compatible RCM2300 model is also available.)

Designing with RabbitCores:

The RabbitCore family of microprocessor core modules is designed to facilitate rapid development and implementation of embedded systems. RabbitCores are powered by high-performance 8-bit Rabbit microprocessors with extensive integrated features and a C-friendly instruction set designed for use with the Dynamic C® development system. The RabbitCore mounts on a user-designed motherboard and acts as the controlling microprocessor for the user's system. Small in size but packed with powerful features, these core modules give designers a complete package for control and communication. The integrated Ethernet port frees designers from the limitations of serial-port communications and control and also permits instant local or worldwide connectivity using low-cost networking hardware. Embedded systemsusing the Ethernet RabbitCore module can be controlled and monitored (as well as programmed and debugged when using appropriate accessory hardware) across any network or the Internet.

Feature:	RCM2200	RCM2210	RCM2250
Microprocessor	Rabbit 2000™ at 22.1 MHz		
Ethernet Port	10Base-T, RJ-45, 2 LEDs	10Base-T (raw signals only)	10Base-T, RJ-45, 2 LEDs
Flash	256K		512K
SRAM	128K		512K
Backup Battery	Connection for user-supplied battery (to support RTC and SRAM)		
General Purpose I/O	26 parallel I/O include: • 16 configurable I/O • 7 fixed inputs • 3 fixed outputs		
Additional Inputs	2 Startup Mode, Reset		
Additional Outputs	Status, Reset		
Memory I/O	4 address, 8 data, plus I/O Read-Write		
Serial Ports	Four 5 V CMOS-compatible, 2 configurable as clocked ports (1 clocked line available only on programming header)		
Serial Rate	Max. burst rate = CLK/32 Max. sustained rate = burst/2		
Connectors	Two 2 x 13, 2 mm IDC headers		
Slave Interface	Slave port permits use as master or as intelligent peripheral with other master controller		
Timers	Five 8-bit timers (four cascadable from the first) and one 10-bit timer with 2 match registers		
Board Size	2.3" x 1.6" x 0.86" (59 x 41 x 22 mm)		



RoHS Compliant

Features:

- Compact size (2.3" x 1.6" x 0.86")
- 10Base-T Ethernet
- Up to 512K Flash
- Up to 512K SRAM
- 26 general-purpose I/O
- With Real-Time Clock: RCM(2200,2210,2250)
- With Watchdog/Supervisor: RCM(2200,2210,2250)
- Power: 4.75-5.25 V DC, 134 mA
- Operating Temp.: -40° to +70°C
- Humidity: 5-95%, non-condensing

✻ Software available à la carte. See www.mouser.com/rabbitsemi **For quantities of 100 and up, call for quote.**

MOUSER STOCK NO. Mfr.	Mfr. Part No.	Description	Price Each 1	Price Each 10
694	20-101-0454	RCM2200 RabbitCore Module	55.00	44.00
694	20-101-0488	RCM2210 RabbitCore Module	49.00	47.75
694	20-101-0494	RCM2250 RabbitCore Module	79.00	62.00

Available Options and Accessories

For quantities of 10 and up, call for quote.

MOUSER STOCK NO. Mfr.	Mfr. Part No.	Description	Price Each
694	101-0403	TCP/IP Took Kit	99.00
694	101-0417	RabbitLink Card	129.00
694	101-0589	Rabbit Cloning Board	89.00
694	101-0467	8MB Serial Flash Expansion Board	119.00
694	540-0070	RS-232-to-USB Converter Cable	39.00
694	151-0113	Connector Adapter Board	15.00

Development Kit

For quantities of 10 and up, call for quote.

MOUSER STOCK NO. Mfr.	Mfr. Part No.	Description	Price Each
694	101-0475	RCM2200 Development Kit	239.00

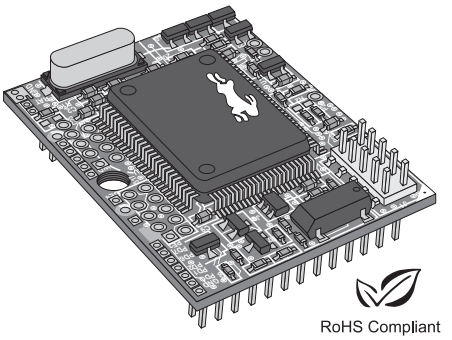
RCM2300 RABBITCORE MICROPROCESSOR MODULE (22.1 MHZ)

The ultra-compact RCM2300 RabbitCore microprocessor core module measures a mere 1.60 x 1.15 inches (41 x 29 mm), simplifying integration and opening up a world of new design options for economical control products. The RCM2300 includes 22.1 MHz clock, 256K of Flash, 128K of SRAM, real-time clock, 29 general-purpose I/O, and 4 serial ports. The RCM2300 is also pin compatible with the RCM2200 Ethernet core module for future Ethernet implementation of user designs.

Designing with RabbitCores: See details at the top of the page.

✻ 1 clocked line available only on programming header.

Feature:	RCM2300
Microprocessor	Rabbit 2000™ at 22.1 MHz
Flash	256K
SRAM	128K
Backup Battery	Connection for user-supplied battery (to support RTC and SRAM)
General Purpose I/O	29 I/O include • 17 configurable I/O • 8 fixed inputs • 4 fixed outputs (9 additional available via separate connections)
Additional Inputs	2 Startup Mode, Reset
Additional Outputs	Status, Reset
Memory I/O	4 address, 8 data, plus I/O Read-Write (extra address and Buffer Enable via separate connections)
Serial Ports	Four 5 V CMOS-compatible, 2 configurable as clocked ports (1 clocked line available only on programming header)
Serial Rate	Max. burst rate = CLK/32 Max. sustained rate = burst/2
Connectors	Two 2 x 13, 2 mm IDC headers
Slave Interface	Slave port permits use as master or as intelligent peripheral with other master controller
Timers	Five 8-bit timers (four cascadable from the first) and one 10-bit timer with 2 match registers
Board Size	1.60" x 1.15" x 0.47", (41 x 29 x 12 mm)



RoHS Compliant

Features:

- Most compact and low-cost RabbitCore
- 1.60" x 1.15" x 0.47"
- 128K SRAM
- 256K Flash
- 29 general-purpose I/O
- With Real-Time Clock
- With Watchdog/Supervisor
- Power: 4.75-5.25 V DC, 108 mA
- Operating Temp.: -40° to +85°C
- Humidity: 5-95%, non-condensing

✻ Software available à la carte. See www.mouser.com/rabbitsemi **For quantities of 100 and up, call for quote.**

MOUSER STOCK NO. Mfr.	Mfr. Part No.	Description	Price Each 1	Price Each 10
694	20-101-0453	RCM2300 RabbitCore Module	42.00	33.00

Available Options and Accessories

For quantities of 10 and up, call for quote.

MOUSER STOCK NO. Mfr.	Mfr. Part No.	Description	Price Each
694	101-0417	RabbitLink Card	129.00
694	101-0589	Rabbit Cloning Board	89.00
694	101-0467	8MB Serial Flash Expansion Board	119.00
694	540-0070	RS-232-to-USB Converter Cable	39.00
694	151-0113	Connector Adapter Board	15.00

Development Kit

For quantities of 10 and up, call for quote.

MOUSER STOCK NO. Mfr.	Mfr. Part No.	Description	Price Each
694	101-0480	RCM2300 Development Kit	199.00

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RABBIT Microprocessors, Core Modules, and Dev. Kits

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RABBIT 3000™ MICROPROCESSOR (55.5 MHZ)

The new Rabbit 3000® is an extremely low-EMI microprocessor designed specifically for embedded control, communications, and Ethernet connectivity. The Rabbit 3000 shares its instruction set and conceptual design with the proven Rabbit 2000.® The Rabbit 3000 is fast-running at up to 54 MHz and C-friendly, with compact code and direct software support for 1 MB of code/data space. Rabbit 3000 development tools include extensive support for Internet and network connectivity, with full source code for TCP/IP provided royalty free The Rabbit 3000 operates at 3.3 V (with 5 V tolerant I/O) and boasts 6 serial ports with IrDA, 56+ digital I/O, quadrature encoder inputs, PWM outputs, and pulse capture and measurement capabilities. It also features a battery-backable real-time clock, glueless interfacing, and ultra-low power modes. Its compact instruction set and high clock speeds give the Rabbit 3000 blazingly fast performance for math, logic, and I/O.

Programming the Rabbit 3000:

Microprocessor hardware and software development is easy for Rabbit users. The Rabbit 3000 is programmed using the industry-proven Dynamic C® software development system from sister division Z-World. Dynamic C is an integrated C compiler, editor, loader, and debugger created specifically for Rabbit-based systems. Developing software with Dynamic C is easy. Programming and debugging are accomplished by connecting a simple interface cable from a PC to a Rabbit-based target system or over Ethernet/Internet using appropriate accessory hardware. Users can write, compile, and test C code, Assembly code, or even intermixed C and Assembly code without leaving the Dynamic C development environment. Debugging occurs while the application runs on the target, eliminating the need for costly in-circuit emulators. Alternatively, you can compile your program to an image file for later loading.

The EMI-Free Microprocessor™:

Government-mandated testing for electromagnetic interference (EMI) often proves a major headache for embedded systems design engineers. Unintentional electromagnetic radiation has the potential to derail development schedules with time-consuming board redesign or costly EMI-reducing components. The Rabbit 3000 has several powerful design features that practically eliminate EMI problems. These features are so effective that it is highly unlikely developers will ever experience EMI issues with the Rabbit 3000.

Royalty-Free TCP/IP:

Full TCP/IP stack with source code is provided royalty free in Dynamic C. TCP/IP support includes PPP (with Dynamic C Premier), socket-level TCP and UDP, FTP, TFTP, HTTP (w/ SSI and CGI), DHCP client, SMTP mail client, PING, and POP3.

Special Low-Power Features:

The Rabbit 3000 contains a number of unique low-power features that make it highly suitable for battery-powered applications. The processor offers ultra-low-speed clock options that allow the chip to operate off of a divided (/2, /4, /8, /16) version of the 32.768 kHz clock or a divided (/2, /4, /6, /8) version of the fast clock. Some types of Flash memory and SRAM consume power whenever the chip select is enabled, even if no signals are changing. The Rabbit 3000 has features to minimize the "chip select enabled" duty cycle to reduce this unnecessary power consumption when the Rabbit 3000 is running at divided clock speeds.

Low-EMI Features of the Rabbit 3000:

- A clock spectrum spreader reduces EMI amplitude derived from the clock by up to 25 dB.
- A clock doubler allows the external oscillator to operate at 1/2 the internal clock frequency.
- Separate power pins for the processor core and I/O ring prevent propagation of core noise to signal lines.
- Gated clocks in the internal logic blocks the clock-driving parts of the processor clock tree that are not in use for a particular instruction, reducing the amplitude of EMI generated by clock-related current surges.
- An auxiliary I/O bus limits loading and makes unnecessary the physical extension of fast data and address lines in the system.
- Bus architecture eliminates the need for routing the clock out of the processor.
- The spectrum spreader is especially powerful, effectively reducing clock-related EMI and derivative signals by approximately 25 dB-a design-critical amount, as devices often fail EMI tests by as little as 5 dB.

Key Programming Features:

- Fast compiler with one-step compiling and downloading to target
- Full-feature source and/or Assembly-level debugger
- Hundreds of functions in source-code libraries and sample programs
  - -Exceptionally fast support for floating-point arithmetic and transcendental functions
  - -RS-232 and RS-485 serial communications
  - -Analog and digital I/O drivers
  - -I2C, SPI, GPS, Encryption, File System
- Powerful language extensions for cooperative or preemptive multi-tasking
- Loader utility program to load binary images onto targets in the absence of Dynamic C
- Create your own source code libraries and augment on-line help by creating "function description" block comments using a special format for library functions
- Generate programs that use as much as 512K of data in SRAM and 512K of code in Flash or EPROM

Package Size	16 x 16 x 1.5 mm
Operating Voltage	1.8-3.6 V DC (5 V tolerant)
Operating Current	2 mA/MHz @ 3.3 V
Operating Temp.	-55°C to +85°C
Serial Ports	6
I/O Pins	56 (plus multipurpose pins) arranged in seven 8-bit ports
Memory Addressing Range	20 lines (1 MB), more can be interfaced easily
Timers	Ten 8-bit and one 10-bit with 2 match registers

✻ Software available à la carte. See www.mouser.com/rabbitsemi

Microprocessors

For quantities of 500 and up, call for quote.

MOUSER STOCK NO.	Mfr. Part No.	Package	Price Each 1	10	25	100
694—20-668-0011		LQFP-128 (Lead Free)	15.22	14.95	14.07	13.45

Add on Development Products

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Mfr. Part No.	Description	Price Each
694—040-0003		Rabbit 3000 Reference Design Book	44.95
694—101-0403		TCP/IP Tool Kit	99.00
694—101-0417		RabbitLink Card	129.00
694—20-101-0589		Rabbit Cloning Board - RoHS	89.00
694—101-0467		8MB Serial Flash Expansion Board	119.00

Development Kits

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Mfr. Part No.	Description	Price Each
694—101-0523		RCM3000 Development Kits	299.00
694—101-0533		RCM3100 Development Kits	239.00
694—101-0552		RCM3200 Development Kits	349.00
694—101-0587		RCM3400 Development Kits	399.00

RCM3000 RABBIT 3000 DEVELOPMENT KIT

The Rabbit 3000® Development Kit includes an RCM3010 Ethernet core module (with Rabbit 3000 microprocessor, Flash, SRAM, Ethernet hardware, serial ports and I/O ports), a prototyping board, Dynamic C® SE development software with TCP/IP stack and documentation on CD-ROM (not a trial version), AC adapter (U.S. only), and serial cable for programming and debugging. The Rabbit 3000 microprocessor is ready for immediate software development. User programs are created using Dynamic C SE, a software development environment that includes an editor, compiler, and debugger. Programs are compiled and executed using Dynamic C and a programming cable-no costly in circuit emulator is required. Full TCP/IP source code is provided in addition to the Dynamic C software on CD-ROM.

The prototyping board included in the kit allows for immediate evaluation and development of TCP/IP or non-TCP/IP applications using the Rabbit 3000 microprocessor. Executable code can be downloaded into Flash memory or SRAM. The prototyping board provides both 3.3 V and 5 V regulated power supplies, two RS-232 communication ports, two sockets for Rabbit RCM3000 Series modules, backup battery (supports RTC and SRAM), IrDA interface, and an interface for our optional keypad/display.

Features:

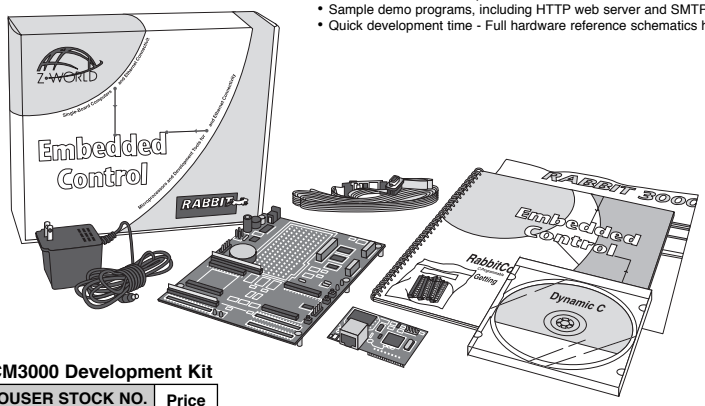
- 3.3 V and 5 V regulated power supplies
- Rabbit 3000 processor running at 29.4 MHz
- 10Base-T Ethernet interface
- 52 parallel I/O (shared with peripheral features)
- 6 serial ports
- 256K Flash/128K SRAM
- 11 built-in timers
- Real-time clock
- Watchdog timer

Optional TCP/IP Tool Kit:

This kit is intended to help in application development by providing the accessories needed to interface to a 10Base-T network. Includes an Ethernet hub, two Ethernet straight-thru cables, and one Ethernet crossover cable. The hub includes the four 10Base-T ports, a slim metal case, and built-in LED indicators, The Ethernet ports provide effective information exchange, resource sharing, and a client/server or peer-to-peer solution using simple UTP (unshielded twisted pair) wiring. Once powered on, the Ethernet hub is operational with no configuration required and is ideal for desktop development.

Key Benefits:

- Ethernet ready - Port to an Ethernet chip for the Rabbit 3000.
- Cost-effective - no run-time royalties
- Simplified development - A complete Dynamic C SE software package (with integrated editor, compiler, and debugger) is provided.
- No in-circuit emulator required!
- Sample demo programs, including HTTP web server and SMTP mail client, provide an advanced starting point for development.
- Quick development time - Full hardware reference schematics help reduce development efforts.



RCM3000 Development Kit

MOUSER STOCK NO.	Mfr. Part No.	Price Each
694—101-0523		299.00

✻ Software available à la carte. See www.mouser.com/rabbitsemi

For quantities of 10 and up, call for quote.

MOUSER STOCK NO.	Mfr. Part No.	Description	Price Each
694—20-101-0507		RCM3000 RabbitCore Module - RoHS	79.00
694—20-101-0508		RCM3010 RabbitCore Module - RoHS	59.00

Add on Development Products

MOUSER STOCK NO.	Mfr. Part No.	Description	Price Each
694—101-0403		TCP/IP Tool Kit	99.00
694—101-0580		RabbitLink Card	129.00
694—20-101-0589		Rabbit Cloning Board - RoHS	89.00
694—101-0601		Keypad/Display Unit, 3.3V	79.00
694—101-0541		Panel Mount Keypad/Display/Unit, 3.3V	99.00
694—540-0066		20" Cable for Panel Mount Keypad/Display	15.00
694—101-0467		8MB Serial Flash Expansion Board	119.00
694—540-0070		RS-232-to-USB Converter Cable	39.00

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RABBIT Microprocessors, Core Modules, and Dev. Kits

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RCM3100 RABBIT 3000 DEVELOPMENT KIT

The RCM3100 Development Kit includes an RCM3110 core module (with Rabbit 3000® microprocessor, Flash, SRAM, serial ports, and I/O ports), a prototyping board, Dynamic C® SE development software with documentation on CD-ROM (not a trial version), AC adapter (U.S. only), and serial cable for programming and debugging. The RCM3100 is ready for immediate software development. User programs are created using Dynamic C SE, a software development environment that includes an editor, compiler, and debugger. Programs are compiled and executed using Dynamic C and a programming cable - no costly in circuit emulator is required.

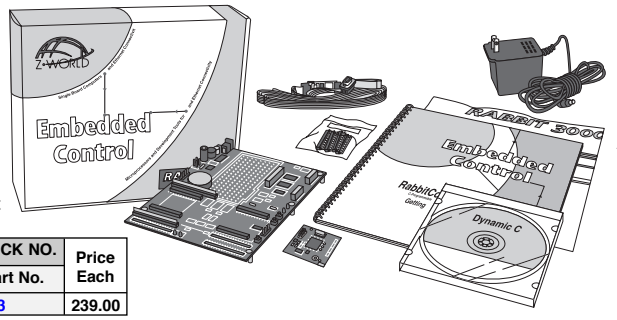
The prototyping board included in the kit allows for immediate evaluation and development of applications using the RCM3100. Executable code can be downloaded into Flash memory or SRAM. The prototyping board provides both 3.3 V and 5 V regulated power supplies, two RS-232 communication ports, two sockets for Rabbit RCM3100 Series modules, backup battery (supports RTC and SRAM), IrDA interface, and an interface for our optional keypad/display.

Features:

- 3.3 V and 5 V regulated power supplies
- Rabbit 3000 processor running at 29.4 MHz
- 54 parallel I/O (shared with peripheral features)
- 6 serial ports
- 256K Flash / 128K SRAM
- 11 built-in timers
- Real-time clock
- Watchdog timer

Key Benefits:

- Cost-effective - no run-time royalties
- Simplified development - A complete Dynamic C SE software package (with integrated editor, compiler, and debugger) is provided. No in-circuit emulator required!
- Sample demo programs provide an advanced starting point for development.
- Quick development time - Full hardware reference schematics help reduce development efforts.



RCM3100 Development Kit

MOUSER STOCK NO.		Price Each
Mfr.	Mfr. Part No.	
694—101-0533		239.00

✻ Software available à la carte. See www.mouser.com/rabbitsemi **For quantities of 10 and up, call for quote.**

MOUSER STOCK NO.		Description	Price Each
Mfr.	Mfr. Part No.		
694—20-101-0517		RCM3100 RabbitCore Module - RoHS	65.00
694—20-101-0518		RCM3110 RabbitCore Module - RoHS	45.00

Add on Development Products

MOUSER STOCK NO.		Description	Price Each
Mfr.	Mfr. Part No.		
694—20-101-0589		Rabbit Cloning Board - RoHS	89.00
694—101-0467		8MB Serial Flash Expansion Board	119.00
694—540-0070		RS-232-to-USB Converter Cable	39.00
694—151-0113		Connector Adapter Board	15.00

RCM3200 RABBIT 3000 DEVELOPMENT KIT

The RCM3200 Development Kit includes an RCM3200 core module (with Rabbit 3000® microprocessor, Flash, 2 SRAMs, serial ports, and I/O ports), a prototyping board, Dynamic C® SE development software with documentation on CD-ROM (not a trial version), AC adapter (U.S. only), and serial cable for programming and debugging. The RCM3200 is ready for immediate software development. User programs are created using Dynamic C SE, a software development environment that includes an editor, compiler, and debugger. Programs are compiled and executed using Dynamic C and a programming cable - no costly in circuit emulator is required.

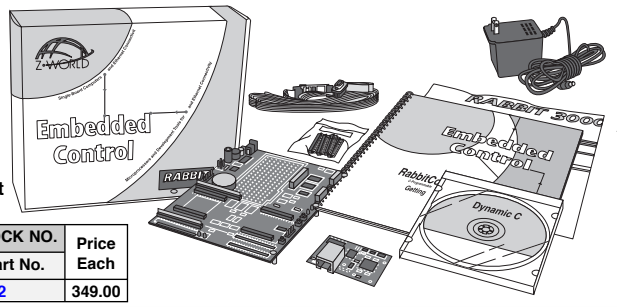
The prototyping board included in the kit allows for immediate evaluation and development of applications using the RCM3200. Executable code can be downloaded into Flash memory or SRAM. The prototyping board provides both 3.3 V and 5 V regulated power supplies, two RS-232 communication ports, two sockets for Rabbit RCM30/31/3200 modules, backup battery (supports RTC and SRAM), IrDA interface, and an interface for our optional keypad/display.

Features:

- 3.3 V and 5 V regulated power supplies
- Rabbit 3000 processor running at 44.2 MHz
- 52 parallel I/O (shared with peripheral features)
- 6 serial ports
- 512K Flash / 512K SRAM (program) & 256K SRAM (data)
- Ten 8-bit timers
- Real-time clock
- Watchdog timer

Key Benefits:

- Cost-effective - no run-time royalties
- Simplified development - A complete Dynamic C SE software package (with integrated editor, compiler, and debugger) is provided. No in-circuit emulator required!
- Sample demo programs provide an advanced starting point for development.
- Quick development time - Full hardware reference schematics help reduce development efforts.



RCM3200 Development Kit

MOUSER STOCK NO.		Price Each
Mfr.	Mfr. Part No.	
694—101-0552		349.00

✻ Software available à la carte. See www.mouser.com/rabbitsemi **For quantities of 10 and up, call for quote.**

MOUSER STOCK NO.		Description	Price Each
Mfr.	Mfr. Part No.		
694—20-101-0507		RCM3200 RabbitCore Module - RoHS	89.00

Add on Development Products

MOUSER STOCK NO.		Description	Price Each
Mfr.	Mfr. Part No.		
694—101-0403		TCP/IP Tool Kit	99.00
694—101-0467		8MB Serial Flash Expansion Board	119.00
694—540-0070		RS-232-to-USB Converter Cable	39.00
694—151-0113		Connector Adapter Board	15.00

RCM3400 RABBIT 3000 DEVELOPMENT KIT

The RCM3400 Development Kit includes an RCM3400 core module (512K Flash/512K SRAM), a development board with 10/100Base-T Ethernet and prototyping area, Dynamic C® SE development software with documentation on CD-ROM (not a trial version), AC adapter (U.S. only), and serial cable for programming and debugging. The RCM3400 is ready for immediate software development. User programs are created using Dynamic C SE, a software development environment that includes an editor, compiler, and debugger. Programs are compiled and executed using Dynamic C and a programming cable--no costly in circuit emulator is required.

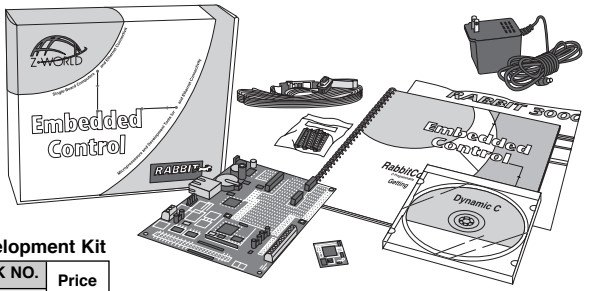
The development board included in the kit allows for immediate evaluation and development of applications using the RCM3400. Executable code can be downloaded into Flash memory or SRAM. The prototyping board provides 10/100Base-T Ethernet connectivity, both 3.3 V and 5 V regulated power supplies, two RS-232 and one RS-485 communication ports, one socket for a Rabbit RCM30/31/32/3400 module, one socket for a display or custom user device, backup battery (supports RTC and SRAM), IrDA interface, and an interface for our optional keypad/display.

Features:

- 3.3 V operation
- Powerful Rabbit 3000® microprocessor
- Low-EMI (typically <10 dB μV/m @ 3 m)
- Up to 512K Flash / 512K SRAM
- 8 channel 12-bit A/D with programmable gain
- 47 digital I/O, alternate I/O bus
- 5 serial ports (IrDA, SDLC/HDLC, asynch, SPI)
- MAC ID installed

Key Benefits:

- Cost-effective - no run-time royalties
- Simplified development - A complete Dynamic C SE software package (with integrated editor, compiler, and debugger) is provided with royalty-free TCP/IP stack.
- Sample demo programs provide an advanced starting point for development.
- Quick development time - Full hardware reference schematics help reduce development efforts.



RCM3400 Development Kit

MOUSER STOCK NO.		Price Each
Mfr.	Mfr. Part No.	
694—101-0587		399.00

✻ Software available à la carte. See www.mouser.com/rabbitsemi **For quantities of 10 and up, call for quote.**

MOUSER STOCK NO.		Description	Price Each
Mfr.	Mfr. Part No.		
694—20-101-0561		RCM3400 RabbitCore Module - RoHS	79.00
694—20-101-0562		RCM3410 RabbitCore Module - RoHS	59.00

Add on Development Products

694—101-0541	Keypad/Display Unit in Plastic Case. Water-resistant remote keypad/display, 7-key/122 x 32 pixel LCD operating at 3.3V DC. (Cable not included, see below).	99.00
694—101-0502	Keypad/Display Unit in Plastic Case, Water-Resistant Remote Keypad/Display, 7-Key/122x32 pixel LCD Operating at 5V DC. (Cable Not Included, See Below)	99.00
694—540-0066	Keypad/Display Unit Cable. 20" cable for panel-mount keypad/display unit.	15.00
694—101-0403	TCP/IP Tool Kit	99.00
694—101-0467	8MB Serial Flash Expansion Board	119.00
694—540-0070	RS-232-to-USB Converter Cable	39.00

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RABBIT Microprocessor Core Modules

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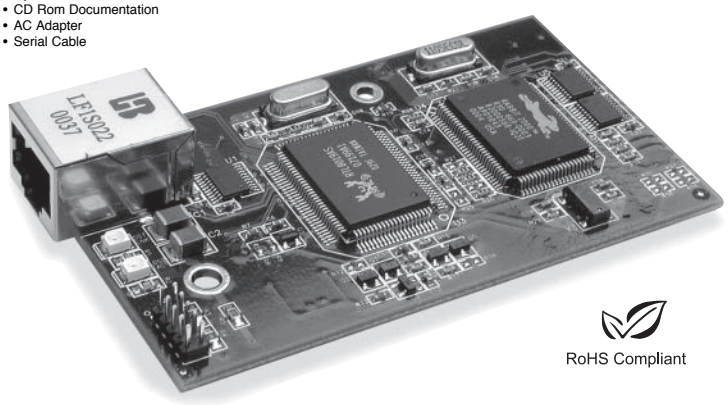
RCM2100 RABBITCORE MICROPROCESSOR MODULES (22.1MHZ)

The RCM2100 is our full-featured RabbitCore microprocessor core module, available in four different models—2 with integrated Ethernet and 2 without. The RCM2100 features up to 512K of Flash memory and 512K of SRAM, as well as buffered external memory-addressing capability. The 34 parallel user I/O (40 for non-Ethernet) shared with 4 serial ports make local control and communication a breeze.

Development Kit Features:
- RCM2100 Microprocessor Core Module
- Prototyping Board
- Dynamic C SE Software
- CD Rom Documentation
- AC Adapter
- Serial Cable



RoHS Compliant

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.		Description	Price Each	
Mfr.	Mfr. Part No.		1	10
694—20-101-0434		RCM 2100 Core (Ethernet, 512K Flash, 512K SRAM, 34 I/O)	89.00	85.59
694—20-101-0435		RCM 2110 Core (Ethernet, 256K Flash, 128K SRAM, 34I/O)	59.00	57.20
694—20-101-0436		RCM 2120 Core (Non-Ethernet, 512K Flash, 512K SRAM, 40 I/O)	69.00	65.50
694—20-101-0446		RCM 2130 Core (Non-Ethernet, 256K Flash, 128K SRAM, 40 I/O)	49.00	46.50
694—101-0451		RCM 2100 Development Kit	279.00	279.00

RCM2100 RabbitCore Specifications

Features	RCM2100	RCM2110	RCM2120	RCM2130
Microprocessor	Rabbit 2000T at 22.1 MHz			
Ethernet Port	10Base-T, RJ-45, 2 LEDs		None	
Flash	512K	256K	512K	256K
SRAM	512K	128K	512K	128K
Backup Battery	Connection for user-supplied battery (to support RTC and SRAM)			
General Purpose I/O	34 parallel I/O include • 20 configurable I/O • 8 fixed inputs • 6 fixed outputs (grouped in five 8-bit ports and shared with serial ports)		40 parallel I/O include • 26 configurable I/O • 8 fixed inputs • 6 fixed outputs (grouped in five 8-bit ports and shared with serial ports)	
Additional Inputs	2 Startup Mode, Reset In			
Additional Outputs	Status, Clock, Watchdog Out, Reset Out			
Memory I/O	13 buffered address, 8 buffered data, plus I/O Read-Write and Buffer Enable			
Serial Ports	Four 5 V CMOS-compatible, 2 configurable as clocked ports			
Serial Rate	Max. burst rate = CLK/32 Max. sustained rate = burst/2			
Connectors	Two 2 x 20, 2 mm IDC headers			
Slave Interface	Slave port permits use as master or as intelligent peripheral with Rabbit-based or other master controller			
Real-Time Clock	Yes			
Timers	Five 8-bit timers (four cascadable from the first) and one 10-bit timer with 2 match registers			
Watchdog/Supervisor	Yes			
Power	4.75-5.25 V DC, 140 mA			
Operating Temp.	-40° to +70°C		-40° to +85°C	
Humidity	5-95%, non-condensing			
Board Size	3.5" x 2.0" x 0.86" (89 x 51 x 22 mm)		3.5" x 2.0" x 0.5" (89 x 51 x 13 mm)	

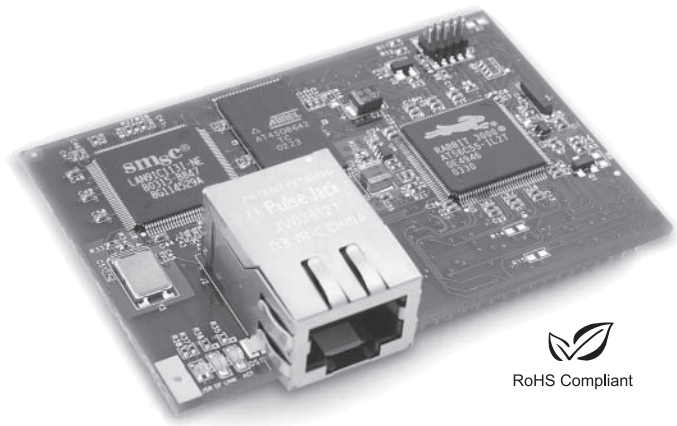
RCM3305 / 3315 / 3360 / 3370 RABBITCORE MICROPROCESSOR MODULE (44.0MHZ)

RCM3305 / 3315 / 3360 / 3370 - Smarter.Faster.Stronger

The RCM3305/3315 RabbitCore™ microprocessor core modules are ideal solutions for designers who want to rapidly develop serial Flash into their embedded application and 10/100Base-T ethernet into their embedded application. The RCM3305/3315 offer 4 - 8 MB of serial Flash.

Design Advantages:
- Ideal for network enabling Security & Access Systems, Home Automation, HVAC Systems, and Industrial Controls
- Reduces time-to-market by months
- Lots of storage with safe, secure firmware and data transfers

Development Kit Features:
- Microprocessor Core Module
- Prototyping Board
- Dynamic C SE Software
- CD Rom Documentation
- AC Adapter
- Serial Cable



RoHS Compliant

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.		Description	Price Each	
Mfr.	Mfr. Part No.		1	10
694—20-101-1067		RCM 3305 Core (8 MB Serial Flash)	119.00	110.00
694—20-101-1068		RCM 3315 Core (4 MB Serial Flash)	99.00	95.00
694—101-1069		RCM 3305 Development Kit	399.00	399.00

RabbitCore RCM3305 Specifications

Features	RCM3305	RCM3315
Microprocessor	Rabbit 3000 @ 44.2 MHz	
Ethernet Port	10/100Base-T, RJ-45, 3 LEDs	
Flash	512K	
SRAM	512K program + 512K data	
Extended Memory (Chip or removable media)	8 MB Serial Flash (chip)	4 MB Serial Flash (chip)
Backup Battery	Connection for user-supplied battery (to support RTC and SRAM)	
LED Indicators	5: ACT (activity), LINK (link), SF (serial flash) 3305/3315, Speed, PFM (Parallel Flash Memory)	
General-Purpose I/O	49 parallel digital I/O: 43 configurable / 3 fixed inputs / 3 fixed outputs	
Additional Inputs	2 Startup Mode, Reset In	
Additional Outputs	Status, Reset Out	
Auxiliary I/O Bus	8 data and 5 address (shared with I/O), plus I/O read-write	
Serial Ports	Five 3.3 V CMOS-compatible: • 5 configurable as asynchronous (with IrDA) • 3 configurable as clocked serial (SPI) • 2 configurable as SDLC/HDLC • 1 asynchronous serial port dedicated for programming	
Serial Rate	Max. asynchronous baud rate = CLK/8	
Slave Interface	Slave port permits use as master or intelligent peripheral with master controller	
Real-Time Clock	Yes	
Timers	Ten 8-bit timers (6 cascadable from the first) and one 10-bit timer with 2 match registers	
Watchdog/Supervisor	Yes	
Pulse-Width Modulators	10-bit free-running counter and four pulse-width registers	
Input Capture	2-channel input capture can be used to time input signals from various port pins.	
Quadrature Decoder	2-channel quadrature decoder accepts inputs from external incremental encoder modules.	
Power	3.15-3.45 V DC, 350 mA @ 3.3 V	
Operating Temp.	-40°C to +70°C	
Humidity	5-95%, noncondensing	
Connectors - Headers - xD memory card	Two 2 x 17 (2 mm pitch), One 2 x 5, 1.27 mm programming	
No	Yes	
Board Size	1.850" x 2.725" x 0.86" (47 x 69 x 22 mm)	

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RABBIT Microprocessor Core Modules

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RCM3000 RABBITCORE MICROPROCESSOR MODULES (29.4 MHZ)

The RCM3000 RabbitCore is Rabbit Semiconductor's most powerful and feature-packed microprocessor core module. Powered by the new Rabbit 3000® - the "EMI-Free microprocessor" - the RCM3000 is the ideal option for designers who want to rapidly develop and implement embedded systems with fully integrated Ethernet connectivity. Measuring only 2.73" x 1.85" (69 x 47 mm), the RCM3000 operates at 3.3 V (with 5 V-tolerant I/O) and features 6 serial ports. Built-in low-EMI features, including a clock spectrum spreader, help designers eliminate the kind of emissions-related problems that frequently derail tight development schedules. Available in two models, the RCM3000 is equipped with 10Base-T Ethernet, up to 512K each of Flash and SRAM, quadrature encoder inputs, PWM outputs, and pulse capture and measurement capabilities. Two 34-pin connection headers provide 52 digital I/O shared with the 6 serial ports and alternate I/O features. The integrated Ethernet port allows instant local or worldwide connectivity. (The RCM3000 is pin compatible with the non-Ethernet RCM3100, facilitating cost-effective implementation of both Ethernet and non-Ethernet systems) The RCM3000 features a battery-backable real-time clock, glueless memory and I/O interfacing, and ultra-low power "sleepy" modes. A fully enabled slave port permits easy master-slave interfacing with another processor-based system, and an alternate I/O bus can be configured for 8 data lines and 6 address lines (shared with parallel I/O). The Rabbit 3000 processor's compact, C-friendly instruction set and high clock speeds produce exceptionally fast results for math, logic, and I/O.

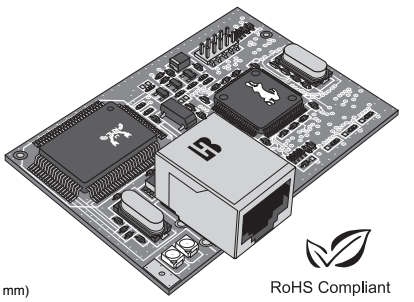
Designing with RabbitCores:

The RabbitCore family of microprocessor core modules is designed to facilitate rapid development and implementation of embedded systems. RabbitCores are powered by high-performance 8-bit Rabbit microprocessors with extensive integrated features and a C-friendly instruction set designed for use with the Dynamic C® SE development system. The RabbitCore mounts on a user-designed motherboard and acts as the controlling microprocessor for the user's system. Small in size but packed with powerful features, these core modules give designers a complete package for control and communication. The integrated Ethernet port frees designers from the limitations of serial-port communications and control and permits instant local or worldwide connectivity using low-cost networking hardware. Embedded systems using the Ethernet RabbitCore module can be controlled and monitored (as well as programmed and debugged when using appropriate accessory hardware) across any network or the Internet.

Feature:	RCM3000	RCM3010
Microprocessor	Rabbit 3000 at 29.4 MHz	
Ethernet Port	10Base-T, RJ-45, 2 LEDs	
SRAM	512K	128K
Backup Battery	Connection for user-supplied battery (to support RTC and SRAM)	
Auxiliary I/O Bus	8 data and 6 address (shared with I/O), plus I/O Read-Write	
Serial Ports	6 CMOS-compatible: • 6 configurable as asynchronous (with IrDA), 4 as clocked serial (SPI), and 2 as SDLC/HDLC (with IrDA) • 1 asynchronous clocked serial port dedicated for programming • Support for MIR/SIR IrDA transceiver	
Serial Rate	Max. asynchronous baud rate = CLK/8	
Slave Interface	Slave port permits use as master or intelligent peripheral with Rabbit-based or other master controller	
Timers	Ten 8-bit timers (6 cascadable from the first) and one 10-bit timer with 2 match registers	
Pulse-Width Modulators	10-bit free-running counter and four pulse-width registers	
Input Capture	2-channel input capture can be used to time input signals from various port pins.	
Quadrature Decoder	2-channel quadrature decoder accepts inputs from external incremental encoder modules.	

Features:

- 3.3 V operation
- Powerful Rabbit 3000® microprocessor
- Low-EMI (typically <10 dB μV/m @ 3 m)
- Built-in Ethernet for simplified connectivity
- Up to 512K Flash/512K SRAM
- 52 digital I/O:
  - 44 configurable I/O
  - 4 fixed inputs
  - 4 fixed outputs
- 6 serial ports (IrDA, SDLC/HDLC, Async, SPI)
- Ultra-low power "sleepy" modes
- With Real-Time Clock: RCM(3000, 3010)
- With Watchdog/Supervisor: RCM(3000, 3010)
- Power: 3.15–3.45 V DC, 150 mA @ 3.3 V
- Operating Temp.: -40° to +70°C
- Humidity: 5-95%, non-condensing
- Additional Inputs: 2 Startup Mode, Reset In
- Additional Outputs: Status, Reset Out
- Connectors: Two 2 x 17 (2mm pitch)
- Board Size: 2.73" x 1.85" x 0.86" (69 x 47 x 22 mm)



RoHS Compliant

✻ Software available à la carte. See www.mouser.com/rabbitsemi

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.		Description	Price Each	
Mfr.	Mfr. Part No.		1	10
694—20-101-0507		RCM3000 RabbitCore Module	79.00	73.73
694—20-101-0508		RCM3010 RabbitCore Module	59.00	54.70

Available Options and Accessories

MOUSER STOCK NO.		Description	Price Each
Mfr.	Mfr. Part No.		
694—20-101-0541		Keypad/Display Unit in Plastic Case. Water-resistant remote keypad/display, 7-key/122 x 32 pixel LCD oper. at 2.7-5V DC. (Cable not included, see below).	99.00
694—540-0066		Keypad/Display Unit Cable. 20" cable for panel-mount keypad/display unit.	15.00
694—101-0403		TCP/IP Tool Kit	99.00
694—101-0589		Rabbit Cloning Board	89.00
694—101-0467		8MB Serial Flash Expansion Board	119.00
694—540-0070		RS-232-to-USB Converter Cable	39.00
694—151-0113		Connector Adapter Board	15.00

Development Kit

694—101-0523	RCM3000 Development Kits	299.00

RCM3100 RABBITCORE MICROPROCESSOR MODULE (29.4 MHZ)

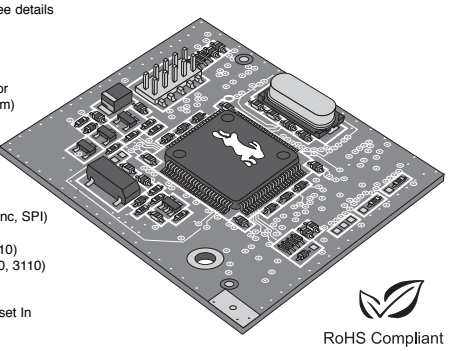
The RCM3100 RabbitCore microprocessor core module is the ideal option for designers who want to rapidly develop and implement embedded systems. Powered by the new Rabbit 3000® microprocessor, the compact RCM3100 boasts powerful features and a small footprint - 1.85" x 1.65" (47 x 42 mm)–to simplify integration. The RCM3100 has 6 serial ports and operates at 29.4 MHz and 3.3 V (with 5 V-tolerant I/O). Built-in low-EMI features, including a clock spectrum spreader, help designers eliminate the kind of emissions-related problems that frequently derail tight development schedules. Available in two models, the RCM3100 is equipped with up to 512K each of Flash and SRAM, quadrature encoder inputs, PWM outputs, and pulse capture and measurement capabilities. Two 34-pin connection headers provide 54 digital I/O shared with the 6 serial ports and alternate I/O features. (The RCM3100 is pin compatible with the Ethernet RCM3000, facilitating cost-effective implementation of both Ethernet and non-Ethernet systems.) The RCM3100 features a battery-backable real-time clock, glueless memory and I/O interfacing, and ultra-low power "sleepy" modes. A fully enabled 8-bit slave port permits easy master-slave interfacing with another processor-based system, and an alternate I/O bus can be configured for 8 data lines and 6 address lines (shared with parallel I/O). The Rabbit 3000 processor's compact, C-friendly instruction set and high clock speeds produce exceptionally fast results for math, logic, and I/O.

Feature:	RCM3100	RCM3110
Microprocessor	Rabbit 3000 at 29.4 MHz	
Flash	512K (2 x 256K)	256K
SRAM	512K	128K
Backup Battery	Connection for user-supplied battery (to support RTC and SRAM)	
Auxiliary I/O Bus	8 data and 6 address (shared with I/O), plus I/O Read-Write	
Serial Ports	6 CMOS-compatible: • 6 configurable as asynchronous (with IrDA), 4 as clocked serial (SPI), and 2 as SDLC/HDLC (with IrDA) • 1 asynchronous clocked serial port dedicated for programming • Support for MIR/SIR IrDA transceiver	
Serial Rate	Max. asynchronous baud rate = CLK/8	
Slave Interface	Slave port permits use as master or intelligent peripheral with Rabbit-based or other master controller	
Timers	Ten 8-bit timers (6 cascadable from the first) and one 10-bit timer with 2 match registers	
Pulse-Width Modulators	10-bit free-running counter and four pulse-width registers	
Input Capture	2-channel input capture can be used to time input signals from various port pins.	
Quadrature Decoder	2-channel quadrature decoder accepts inputs from external incremental encoder modules.	
Power	3.15–3.45 V DC 75 mA @ 3.3 V	

Designing with RabbitCores: See details at the top of the page.

Features:

- 3.3 V operation
- Powerful Rabbit 3000® microprocessor
- Low-EMI (typically <10 dB μV/m @ 3 m)
- Up to 512K Flash/512K SRAM
- Ultra-low power "sleepy" modes
- 54 digital I/O:
  - 46 configurable I/O
  - 4 fixed inputs
  - 4 fixed outputs
- 6 serial ports (IrDA, SDLC/HDLC, Async, SPI)
- Ultra-low power "sleepy" modes
- With Real-Time Clock: RCM(3100, 3110)
- With Watchdog/Supervisor: RCM(3100, 3110)
- Operating Temp.: –40°C to +85°C
- Humidity: 5-95%, non-condensing
- Additional Inputs: 2 Startup Mode, Reset In
- Additional Outputs: Status, Reset Out
- Connectors: Two 2 x 17 (2mm pitch)
- Board Size: 1.85" x 1.65" x 0.48" (47 x 42 x 12 mm)



RoHS Compliant

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.		Description	Price Each	
Mfr.	Mfr. Part No.		1	10
694—20-101-0517		RCM3100 RabbitCore Module	65.00	55.00
694—20-101-0518		RCM3110 RabbitCore Module	45.00	40.00

Available Options and Accessories

Above accessories for RCM (3000, 3010) are applicable with RCM (3100, 3110)

Development Kit

694—101-0533	RCM3100 Development Kits	239.00	Call

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RABBIT Microprocessor Core Modules

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RCM3200 RABBITCORE MICROPROCESSOR MODULE (44.2MHZ)

The RCM3200 RabbitCore microprocessor core module is an ideal option for designers who want to rapidly develop and implement embedded systems with integrated 10/100Base-T Ethernet connectivity. Measuring only 2.73" x 1.85" (69 x 47 mm), the RCM3200 operates at 3.3 V (with 5 V-tolerant I/O) and features 6 serial ports. Built-in low-EMI features, including a clock spectrum spreader, practically eliminate EMI problems, helping OEMs pass CE and regulatory RF emissions tests. Powered by the Rabbit 3000® microprocessor running at 44.2 MHz, the RCM3200 is equipped with 512K Flash memory, 512K program execution SRAM and 256K data SRAM, quadrature decoder, PWM outputs, and pulse capture capabilities. Two 34-pin connection headers provide 52 digital I/O shared with the 6 serial ports and alternate I/O features. The integrated Ethernet port allows real-time local or worldwide connectivity. The RCM3200 features a battery-backable real-time clock, glueless memory and I/O interfacing, and low-power "sleepy" modes. A fully enabled slave port permits easy master-slave interfacing with another processor-based system, and an alternate I/O bus can be configured for 8 data lines and 6 address lines (shared with parallel I/O). The Rabbit 3000 processor's compact, C-friendly instruction set and high clock speeds produce exceptionally fast results for math, logic, and I/O. RabbitCores mount directly on a user-designed motherboard and act as the controlling microprocessor for the user's system. RabbitCores can interface with all manner of CMOS-compatible digital devices through the user's motherboard. Programs are developed with our industry-proven Dynamic C® SE development system, a C-language environment that includes an editor, compiler, and in-circuit debugger (Dynamic C SE is included in low-cost development kits). Efficient hardware and software integration facilitates rapid design and development. User programs can be compiled, executed, and debugged using Dynamic C and a programming cable-no in-circuit emulator is required. An extensive library of drivers and sample programs is provided, along with royalty-free TCP/IP stack with source.

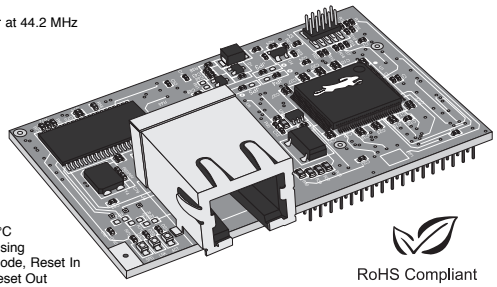
Designing with RabbitCores:

The RabbitCore family of microprocessor core modules is designed to facilitate rapid development and implementation of embedded systems. RabbitCores are powered by high-performance 8-bit Rabbit microprocessors with extensive integrated features and a C-friendly instruction set designed for use with the Dynamic C® SE development system. The RabbitCore mounts on a user-designed motherboard and acts as the controlling microprocessor for the user's system. Small in size but packed with powerful features, these core modules give designers a complete package for control and communication. The integrated Ethernet port frees designers from the limitations of serial-port communications and control and permits instant local or worldwide connectivity using low-cost networking hardware. Embedded systems using the Ethernet RabbitCore module can be controlled and monitored (as well as programmed and debugged when using appropriate accessory hardware) across any network or the Internet.

Feature:	RCM3200
Microprocessor	Rabbit 3000 at 44.2 MHz
Ethernet Port	10/100Base-T, RJ-45, 3 LEDs
SRAM	512K program + 256K data
Backup Battery	Connection for user-supplied battery (to support RTC and SRAM)
Auxiliary I/O Bus	8 data and 6 address (shared with I/O), plus I/O Read-Write
Serial Ports	6 CMOS-compatible: • 6 configurable as asynchronous (with IrDA), 4 as clocked serial (SPI), and 2 as SDLC/HDLC (with IrDA) • 1 asynchronous clocked serial port dedicated for programming • Support for MIR/SIR IrDA transceiver
Serial Rate	Max. asynchronous baud rate = CLK/8
Slave Interface	Slave port permits use as master or intelligent peripheralwith Rabbit-based or other master controller
Timers	Ten 8-bit timers (6 cascadable from the first) and one 10-bit timer with 2 match registers
Pulse-Width Modulators	10-bit free-running counter and four pulse-width registers
Input Capture	2-channel input capture can be used to time input signals from various port pins.
Quadrature Decoder	2-channel quadrature decoder accepts inputs from external incremental encoder modules.

Features:

- 10/100Base-T Ethernet
- Rabbit 3000® microprocessor at 44.2 MHz
- 3.3 V operation
- Low-EMI
- 512K Flash
- 52 digital I/O:
  44 configurable I/O
  4 fixed inputs
  4 fixed outputs
- With Real-Time Clock
- With Watchdog/Supervisor
- Power:
  3.15–3.45 V DC,
  255 mA @ 3.3 V
- Operating Temp.: -40° to +70°C
- Humidity: 5-95%, non-condensing
- Additional Inputs: 2 Startup Mode, Reset In
- Additional Outputs: Status, Reset Out
- Connectors: Two 2 x 17 (2mm pitch)
- Board Size: 2.73" x 1.85" x 0.86" (69 x 47 x 22 mm)



RoHS Compliant

✻ Software available à la carte. See www.mouser.com/rabbitsemi **For quantities of 100 and up, call for quote.**

MOUSER STOCK NO.	Description	Price Each	
Mfr. / Mfr. Part No.		1	10
694—20-101-0520	RCM3200 RabbitCore Module	89.00	75.30

Available Options and Accessories

MOUSER STOCK NO.	Description	Price Each
Mfr. / Mfr. Part No.		
694—20-101-0541	Keypad/Display Unit in Plastic Case. Water-resistant remote keypad/display, 7-key/122 x 32 pixel LCD oper. at 2.7-5V DC. (Cable not included, see below).	99.00
694—540-0066	Keypad/Display Unit Cable. 20" cable for panel-mount keypad/display unit.	15.00
694—101-0403	TCP/IP Tool Kit	99.00
694—20-101-0467	8MB serial Flash Expansion Board	119.00
694—540-0070	RS-232-to-USB Converter Cable	39.00
694—151-0113	Connector Adapter Board	15.00

Development Kit

694—101-0552	RCM3200 Development Kit	349.00

RCM3400 RABBITCORE MICROPROCESSOR ANALOG MODULE (29.4MHZ)

The RCM3400 analog RabbitCore provides a known-good processor and analog input subsystem for OEMs to quickly integrate into custom designs. The RCM3400 features a low-EMI Rabbit 3000-based CPU subsystem running at 29.4 MHz, with 512K Flash / 512K SRAM or 256K Flash / 256K SRAM, 5 serial ports, and 8 channels of programmable gain analog input in an extremely small footprint (1.37" x 1.16" / 34 x 29 mm). The RCM3400 comes with a pre-assigned MAC I.D. to be Ethernet ready and the development board features 10/100Base-T Ethernet and can be used as a reference design in conjunction with Dynamic C's royalty-free TCP/IP software libraries. Extensive demo programs and software application templates make it easy to get the RCM3400 up and running in record time. RabbitCores mount directly on a user-designed motherboard and can interface with all manner of CMOS-compatible digital devices. Two 34-pin connectors route 47 digital I/O (shared with serial ports), power, and other signals to the motherboard. Built-in low—EMI features, including a clock spectrum spreader, practically eliminate EMI problems, helping OEMs pass CE and regulatory RF emissions tests. The RCM3400 is equipped with 5 V tolerant I/O, quadrature encoder inputs, PWM outputs, and pulse capture and measurement capabilities. The RCM3400 also features a battery-backable real-time clock, glueless memory and I/O interfacing, and low-power "sleepy" modes. A fully enabled 8-bit slave port permits easy master-slave interfacing with another processor-based system, and an alternate I/O bus can be configured for 8 data lines and 6 address lines (shared with parallel I/O). Programmed with Dynamic C, the RCM3400 executes math, logic, and I/O exceptionally quickly. The Rabbit 3000 chip, RCM3400, and Dynamic C were designed in a complementary fashion for maximum performance and ease of use in embedded systems. Our industry-proven Dynamic C® development system is a C—language environment that includes an editor, compiler, and in-circuit debugger. User programs can be compiled, executed, and debugged using Dynamic C and a programming cable-no in-circuit emulator is required. An extensive library of drivers and sample programs is provided, including royalty-free TCP/IP stack with source code.

Feature:	RCM3400	RCM3410
Microprocessor	Rabbit 3000 at 29.4 MHz	
Analog Inputs	8 channels single-ended (11-bit) or 4 channels differential (12-bit) Programmable gain: 1, 2, 4, 5, 8, 10, 16, and 20 V/V. Vref, Convert	
Backup Battery	Connection for user-supplied battery (to support RTC and SRAM)	
Flash	512K	256K
SRAM	512K	256K
Auxiliary I/O Bus	8 data and 6 address (shared with I/O), I/O Read-Write	
Serial Ports	5 CMOS-compatible: • 4 configurable as asynchronous (with IrDA), 3 as clocked serial (SPI), and 2 as SDLC/HDLC (with IrDA) • 1 asynchronous serial port dedicated for programming • Support for MIR/SIR IrDA transceiver	
Serial Rate	Max. asynchronous baud rate = CLK/8	
Timers	Ten 8-bit timers (6 cascadable from the first) and one 10-bit timer with 2 match registers	
Pulse-Width Modulators	10-bit free-running counter and four pulse-width registers	
Input Capture	2-channel input capture can be used to time input signals from various port pins.	
Quadrature Decoder	2-channel quadrature decoder accepts inputs from external incremental encoder modules	

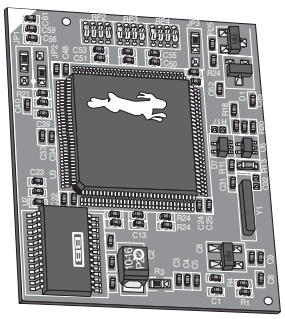
Designing with RabbitCores:

See details at the top of the page.

RoHS Compliant

Features:

- 3.3 V operation
- Powerful Rabbit 3000® microprocessor
- Low-EMI (typically <10 dB μV/m @ 3 m)
- MAC ID installed
- 47 digital I/O: 41 configurable I/O,
  3 fixed inputs, 3 fixed outputs
- Slave Interface: Slave port permits use as master or intelligent peripheral with Rabbit-based or other master controller
- With Real-Time Clock: RCM(3400, 3410)
- With Watchdog/Supervisor: RCM(3400, 3410)
- Operating Temp.: –40°C to +85°C
- Humidity: 5-95%, non-condensing
- Additional Inputs: 2 Startup Mode, Reset In
- Additional Outputs: Status, Reset Out
- Connectors: Two 2 x 17 (1.27 mm pitch)
- Board Size: 1.37" x 1.16" x 0.31" (35 x 29 x 7.4 mm)



For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	Description	Price Each	
Mfr. / Mfr. Part No.		1	10
694—20-101-0561	RCM3400 RabbitCore Module	79.00	66.84
694—20-101-0562	RCM3410 RabbitCore Module	59.00	49.92

Available Options and Accessories

Above accessories for RCM3200 are applicable with RCM(3400, 3410)
Except: Connector Adapter Board

Development Kit

694—101-0587	RCM3400 Development Kit	399.00	- - -

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RABBIT Core Modules and Development Kits

Products may be RoHS compliant.
Check mouser.com for RoHS status.

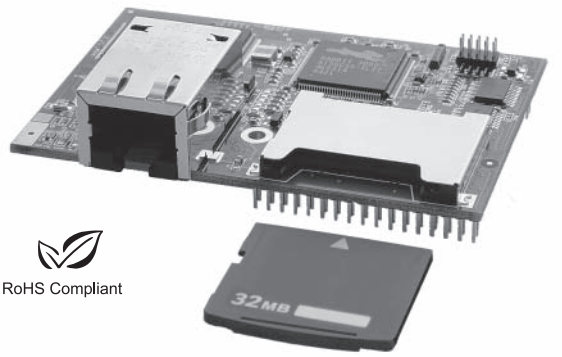
RCM3365/3375 RABBITCORE MICROPROCESSOR MODULES (44.2MHZ)

Feature:	RCM3365	RCM3375
Microprocessor	Rabbit 3000 @ 44.2 MHz	
Ethernet Port	10/100Base-T, RJ-45, 3 LEDs	
Flash	512K	
SRAM	512K program + 512K data	
Extended Memory	16MB NAND Flash (Fixed); xD-picture card socket support up to 128MB	xD-picture card card socket support up to 128 MB
Backup Battery	Connection for user-supplied battery (to support RTC and SRAM)	
LED Indicators	Five ACT (activity), LINK (link), SPEED (10/100 Base-T), FM (Flash Memory), USR (user-programmable)	
General-Purpose I/O	52 parallel digital I/O: 44 configurable / 4 fixed inputs / 4 fixed outputs	
Additional Inputs	Two Startup Mode, Reset In	
Additional Outputs	Status, Reset Out	
Auxillary I/O Bus	8 data and 5 address (shared with I/O), plus I/O read-write	
Serial Ports	Six 3.3 V CMOS-compatible: • 6 configurable as asynchronous (with IrDA), • 4 configurable as clocked serial (SPI) • 2 Configurable as SDLC/HDLC • 1 asynchronous serial port dedicated for programming	
Serial Rate	Max. asynchronous baud rate = CLK/8	
Slave Interface	Slave port permits use as master or intelligent peripheral w/master controller	
Real-Time Clock	Yes	
Timers	Ten 8-bit timers (6 cascadable from the first) & one 10-bit timer w/ 2 match registers	
Watchdog/Supervisor	Yes	
Pulse-Width Modulators	4 PWM, based on a 10-bit free-running counter and priority interrupts	
Priority Interrupts	4 level prioritized interrupt structure consisting of 2 external and 22 internal sources	
Input Capture	2-channel input capture can be used to time input signals from various port pins	
Quadrature Decoder	2-chan. quadrature decoder accepts inputs from external incremental encoder mods	
Power	3.15-3.45 V DC, 250 mA @ 44.2 MHz 3.3 V	
Operating Temp.	-40°C to +70°C	
Humidity	5-95%, noncondensing	
Connectors - Headers	Two 2x17(2mm pitch), one 2x5, 1.27mm programming, one xD-Picture card slot	
Board Size	1.850" x 2.725" x 0.86" (47 x 69 22 mm)	

The RCM3365 and RCM3375 RabbitCore modules present a new form of embedded flexibility with removable "hot-swappable" memory cards. Supporting on-board 16 MB NAND Flash as well as memory cards of up to 128 MB, these RabbitCore modules are ideal for data intensive applications requiring low-power operation.

RCM3365 Development Kit comes complete with:

- RCM3365 RabbitCore
- 32 MB xD-Picture Card™
- Prototyping Board
- Serial cable for programming and debugging
- Dynamic C® with royalty-free TCP/IP stack
- FAT File System Module on CD
- Getting Started Instructions
- AC adapter (U.S. only)
- Complete product documentation on CD



RoHS Compliant

For quantities of 100 and up, call for quote.

MOUSER STOCK NO. Mfr.	Mfr. Part No.	Description	Price Each 1	Price Each 10
694	20-101-1051	RCM 3365 Core Module	105.00	94.50
694	20-101-1055	RCM 3375 Core Module	105.00	94.50
694	101-1053	RCM 3365 Development Kit	399.00	379.00
694	540-0070	RS-232 to USB Converter Cable	39.00	39.00
694	101-0987	Dynamic C 9 Promotional Bundle (Includes: Dynamic C 9, SSL, FAT, RabbitWeb, PPP, SNMP, and AES software modules)	499.00	499.00

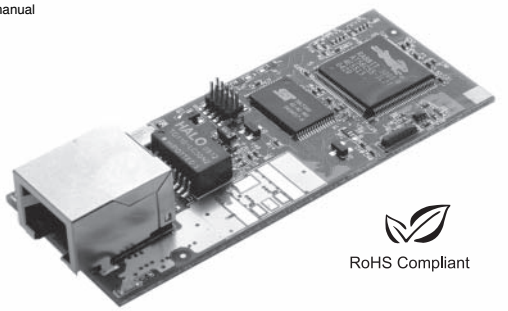
RCM3750 RABBITCORE MICROPROCESSOR MODULES (22.1MHZ)

Feature:	RCM3750
Microprocessor	Rabbit 3000 @ 22.1 MHz
Ethernet Connectivity	10/100Base-T, RJ-45, 3 LEDs
Flash	512K
SRAM	512K
Serial Flash	1MB
Backup Battery	Connection for user-supplied battery (to support RTC and SRAM)
General-Purpose I/O	33 digital I/O • 31 configurable I/O • 2 fixed outputs
Additional Input	Reset
Auxiliary I/O Bus	Can be configured for a 8 data and 5 address lines (shared with parallel I/O lines), plus I/O read/write
Serial Ports	Four 3.3 V CMOS-compatible: • 4 configurable as asynchronous (with IrDA), • 3 as clocked serial (SPI) and 1 as HDLC (with IrDA), or 1 SPI and 2 SDLC/HDLC • 1 asynchronous serial port dedicated for programming
Serial Rate	Max. asynchronous baud rate = CLK/8
Slave Interface	Slave port allows RCM3750 to be used as an intelligent peripheral device slaved to master processor, either another Rabbit 3000 or any other type of processor.
Real-Time Clock	Yes
Timers	Ten 8-bit timers (6 cascadable, 3 reserved for internal peripherals), one 10-bit timer with 2 match registers
Watchdog/Supervisor	Yes
Pulse-Width Modulators	4 PWM output channels with 10-bit free-running counter and priority interrupts
Input Capture/ Quadrature Decoder	2-channel input capture can be used to time input signals from various port pins • 1 quadrature decoder unit accepts inputs from external incremental encoder modules or • 1 quadrature decoder unit shared with 2 PWM channels
Power (w/Ethernet active)	Input: 4.75-5.25 VDC, 175 mA @ 22.1 MHz; 150 mA @ 11.05 MHz
Operating Temp.	-40°C to +70°C
Humidity	5-95%, noncondensing
Connectors	Single 2 x 20, 0.1" (2.54 mm) header
Board Size	2.95" x 1.20" x 0.89" (75 x 30 23 mm)

The RCM3750 features 10/100Base-T connectivity, 512K Flash / 512K SRAM, 4 serial ports, and an extremely small footprint (2.95" x 1.20" / 75 x 30 mm). This ready-made platform provides fast time-to-market with up to three months of integration time savings. The RCM3750 RabbitCore mounts directly onto a user-designed motherboard using a single dual-row IDC header and can interface with all CMOS-compatible digital devices. Digital I/O (shared with serial ports), power, and other signals are directly routed to the motherboard.

RCM 3750 Development Kit includes:

- RCM3750 RabbitCore
- Development board with prototyping area
- AC adapter (U.S./Canada only)
- Serial cable for programming and debugging
- Dynamic C development system (not a trial version) and complete documentation on CD-ROM
- Getting Started manual



RoHS Compliant

✻RoHS Compliant

For quantities of 100 and up, call for quote.

MOUSER STOCK NO. Mfr.	Mfr. Part No.	Description	Price Each 1	Price Each 10
694	20-101-1028	RCM 3750 Core Module	74.00	66.60
694	101-1049	RCM 3750 Development Kit	237.50	237.50
694	540-0070	RS-232 to USB Converter Cable	39.00	39.00
694	101-0403	TCP/IP 10Base-T Accessory Kit	99.00	99.00
✻694	20-101-0580	RabbitLink Card - remote program/debug via Ethernet/Internet	129.00	129.00
694	101-0589	Rabbit Cloning Board - copy compiled software from module to module	89.00	89.00
✻694	20-101-0542	1.27mm Programming Cable	25.00	25.00
694	20-101-0601	Keypad/Display Unit - 3.3 Volt	79.00	79.00
694	20-101-0541	Panel Mount Keypad/Display Unit - 3.3 Volt	99.00	99.00
694	540-0066	Cable for above Panel Mount Keypad/Display Unit	15.00	15.00

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RABBIT Microprocessor Core Modules

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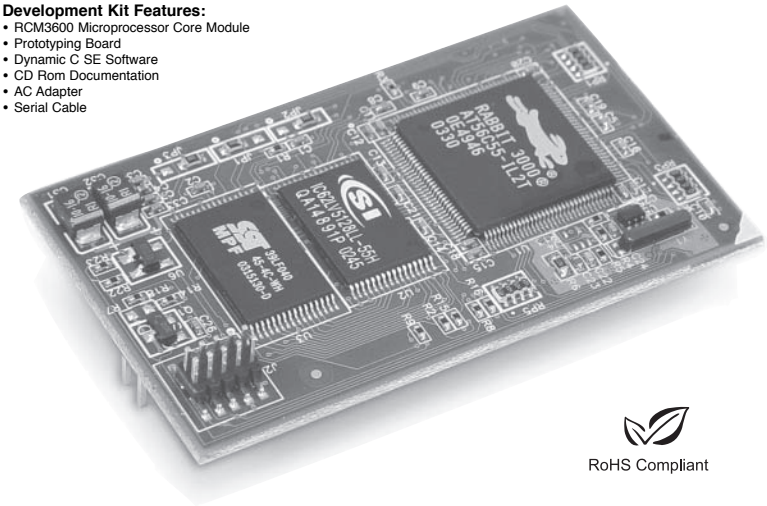
RCM3600/3610 RABBITCORE MICROPROCESSOR MODULE (22.1MHZ)

The RCM3600 RabbitCore is the lowest priced Rabbit 3000 microprocessor based core module designed for a wide variety of applications. The RCM3600 features 512K Flash / 512K SRAM or 256K Flash / 128K SRAM, 4 serial ports, and an extremely small footprint (2.10" x 1.20" / 34 x 29 mm).

This RabbitCore mounts directly on a user-designed motherboard with a single 0.1" (2.54 mm) 2x20 dual-row IDC header and can interface with all manner of CMOS-compatible digital devices. 33 digital I/O (shared with serial ports), power, and other signals are routed directly to the motherboard. Built-in low – EMI features, including a clock spectrum spreader, practically eliminate EMI problems, helping OEMs pass European CE and other regulatory RF emissions tests.

Development Kit Features:
- RCM3600 Microprocessor Core Module
- Prototyping Board
- Dynamic C SE Software
- CD Rom Documentation
- AC Adapter
- Serial Cable



RoHS Compliant

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.		Description	Price Each	
Mfr.	Mfr. Part No.		1	10
694	20-101-0672	RCM 3600 Core (512K Flash, 512K SRAM, 33 I/O)	49.00	47.50
694	20-101-0673	RCM 3610 Core (256K Flash, 128K SRAM, 33 I/O)	39.00	36.50
694	101-0678	RCM 3600 Development Kit	239.00	239.00

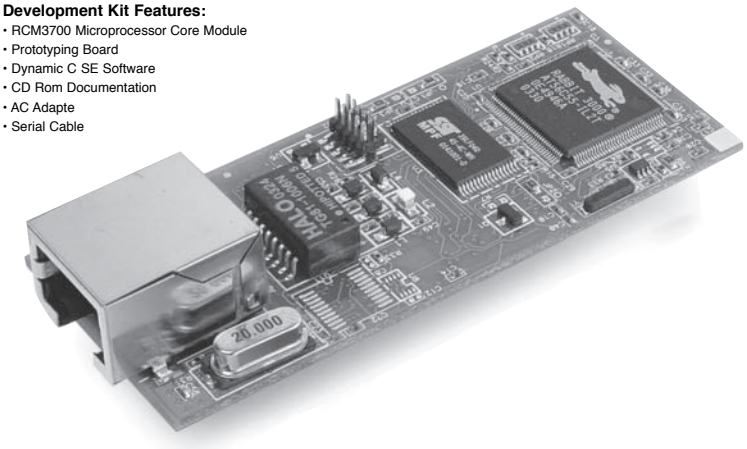
RabbitCore RCM3600 Specifications & Features		
Features	**RCM3600**	**RCM3610**
Microprocessor	Rabbit 3000A at 22.1 MHz	
EMI Reduction	Spectrum spreader for reduced EMI (radiated emissions)	
Flash	512K	256K
SRAM	512K	128K
Backup Battery	Connection for user-supplied battery	
General-Purpose I/O	33 digital I/O • 31 configurable I/O • 2 fixed outputs	
Additional Input	Reset	
Auxiliary I/O Bus	Can be configured for 8 data and 5 address lines (shared with parallel I/Olines), plus I/O read/write	
Serial Ports	Four 3.3 V CMOS-compatible: • 4 configurable as asynchronous (with IrDA) • 3 as clocked serial (SPI) and 1 as HDLC (with IrDA), or 1 SPI and 2 SDLC/HDLC • 1 asynchronous serial port dedicated for programming	
Power	Input : 4.0-12.6 VDC, 60 mA @ 22.1 MHz 38 mA @ 11.06 MHz	
Operating Temp.	–40°C to +85°C	
Humidity	5–95%, noncondensing	
Connectors	Single 2 x 20, 0.1" header	
Board Size	2.10" x 1.20 " x 0.62" (53 x 30 x 16 mm)	

RCM3700/3710 RABBITCORE MICROPROCESSOR MODULE (22.1MHZ)

The RCM3700 RabbitCore is the lowest priced Rabbit 3000 microprocessor based core module designed for Ethernet/Internet applications. The RCM3700 features 512K Flash / 512K SRAM or 256K Flash / 128K SRAM, 4 serial ports, and an extremely small footprint (2.95" x 1.20" / 75 x 30 mm).

This RabbitCore mounts directly on a user-designed motherboard with a single 0.1" (2.54 mm) 2 x 20 dual-row IDC header and can interface with all manner of CMOS-compatible digital devices. 33 digital I/O (shared with serial ports), power, and other signals are routed directly to the motherboard. Built-in low – EMI features, including a clock spectrum spreader, practically eliminate EMI problems, helping OEMs pass European CE and other regulatory RF emissions tests.

Development Kit Features:
- RCM3700 Microprocessor Core Module
- Prototyping Board
- Dynamic C SE Software
- CD Rom Documentation
- AC Adapte
- Serial Cable



For quantities of 100 and up, call for quote.

MOUSER STOCK NO.		Description	Price Each	
Mfr.	Mfr. Part No.		1	10
694	20-101-0674	RCM 3700 Core (Ethernet, 512K Flash, 512K SRAM, 33 I/O)	59.00	57.44
694	20-101-0675	RCM 3710 Core (Ethernet, 256K Flash, 128K SRAM, 33I/O)	49.00	48.00
694	20-101-0961	RCM 3720 Core (Ethernet, 512K Flash, 256K SRAM, 33I/O)	55.00	53.90
694	101-0680	RCM3700 Development Kit	388.70	388.70
694	101-0897	Secure Embedded Web Application Kit	699.00	699.00

RabbitCore RCM3700 Specifications & Features			
Features	**RCM3700**	**RCM3710**	**RCM 3720**
Microprocessor	Rabbit 3000A at 22.1 MHz		
Ethernet Connectivity	10Base-T, RJ-45		
Flash	512K	256K	512K
SRAM	512K	128K	256K
Serial Flash	1MB		
Backup Battery	Connection for user-supplied battery		
General-Purpose I/O	33 digital I/O • 31 configurable I/O • 2 fixed outputs		
Additional Input	Reset		
Auxiliary I/O Bus	Can be configured for 8 data and 5 address lines read/write (shared with parallel I/O lines), plus I/O		
Serial Ports	Four 3.3 V CMOS-compatible: • 4 configurable as asynchronous (with IrDA) • 3 as clocked serial (SPI) and 1 as HDLC (with IrDA), or 1 SPI and 2 SDLC/HDLC 1 asynchronous serial port dedicated for programming		
Power	Input : 4.75-5.25 V DC, 100 mA @ 22.1 MHz ; 78 mA @ 11.06 MHz		
Operating Temp.	–40°C to +70°C		
Humidity	5–95%, noncondensing		
Connectors	Single 2 x 20, 0.1" (2.54 mm) header		
Board Size	2.95" x 1.20" x 0.89" (75 x 30 x 23 mm)		

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RABBIT Ethernet and M2M Development Kits

SERIAL-TO-ETHERNET KIT

Ethernet designers now have a Serial-to-Ethernet Application Kit that is easy to use out of the box. The simple 3-Step Setup for transmitting data from a digital volt meter via a serial port to a TCP/IP stream enables even the newest user to quickly develop a Serial-to-Ethernet application. The kit features digital volt meter software libraries, sample programs and a menuing system, in addition to the Dynamic C integrated development environment. The digital volt meter application software provides a framework for users to start their design with minimal time and effort (volt meter not included in kit).

The Serial-to-Ethernet Application Kit includes a popular RCM3000 RabbitCore module featuring 10Base-T Ethernet and TCP/IP libraries with source code. Measuring only 2.73" x 1.85" (69 x 47 mm) the RMC3000 operates at 3.3V (with 5 V-tolerant I/O) and features 6 serial ports and 52 digital I/O. Available in two models, the RCM3000 is equipped with up to 512K each of Flash and SRAM, quadrature encoder inputs, PWM outputs, and pulse capture and measurement capabilities. Two 34-pin connection headers provide 52 digital I/O shared with the 6 serial ports and alternate I/O features.

Features:

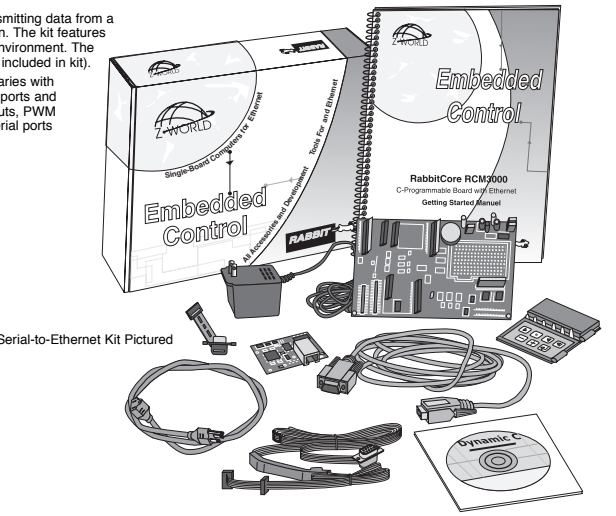
- Serial to Ethernet applications for:
- Digital Volt Meter reader
- Binary & hexadecimal ASCII
- Configuration menuing system
- Royalty-free TCP/IP stack with source code

Design Advantages:

- 3 Step setup
- Minimal Ethernet experience required
- Software compatible with other Rabbit-based products

Serial to Ethernet Application Kit Specifications:

Feature	Serial-to-Ethernet Application Kit
Core Module	RCM3010
Prototyping Board	Standard RCM3000 Prototyping Board
Ethernet	10Base-T, RJ-45
Serial Ports	1 RS-232 hardware defined (additional ports available on RCM3010)
Cables	DB9 Null Modem Cable
Software Compiler	DB9 Null Modem Cable, 10-pin ® DB9 Conversion Cable, Ethernet Crossover Cable Programming Cable
Software Library	Allow faster serial communications: 1 Mbit/s
Sample Programs	Transmit data from DVM and store on a PC
Menuing Systems	For Serial-to-Ethernet configuration
Manuals	Serial-to-Ethernet 3-Step Setup Sheet, RCM3000 Getting Started Manual, RCM3000 User Manual (on CD)
Display	122 x 32 Keypad/Display Unit with LCD menu system



Serial-to-Ethernet Kit Pictured

MOUSER STOCK NO.		Description	Price Each
Mfr.	Mfr. Part No.		
694—101-0689		Serial-to-Ethernet Kit	349.00
694—101-0994		MultiPort Serial-to-Ethernet Kit (RCM3700 Core)	399.00

MACHINE TO MACHINE (M2M) APPLICATION KIT

M2M (machine-to-machine/mobile) brings together **machine control with wireless communications**. With 50 billion "machines" in the world, M2M allows a machine to be monitored or controlled from anywhere, anytime, using current wireless data technologies such as GSM, SMS (text messaging) and GPRS.

Rabbit Semiconductor's M2M Applications Kit provides all the tools necessary to sample and design communications between a Rabbit-based device to a GSM/GPRS-enabled device (e.g. GSM modem/phone, PDA phone). The libraries and sample programs allow for a GSM modem/phone to send SMS (text) messages to a RabbitCore module (RCM) that can interpret messages as commands and in turn can execute control functions. The RCM can also send/receive email from any PC, device or phone. A menu system allows for easy interface on the keypad/display, as well as reading text messages and email. The M2M Application Kit includes Z-World's Dynamic C software with royalty-free TCP/IP stack and PPP module.

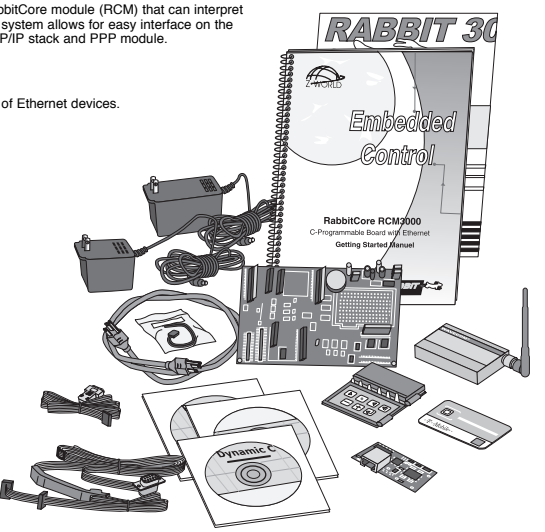
Machine2ME Node
Is a configuration involving an Ethernet-enabled Rabbit-based device at the heart of a Machine equipped with a GSM modem.
The Rabbit-based device acts as a server/node to other Ethernet devices. So a single Rabbit device with a wireless modem can control a number of Ethernet devices.

M2M Applications Kit Highlights:

- HW/SW for wireless RCM-to-GSM communication
- Dual Band GSM/GPRS modem and antenna
- Keypad/Display configuration menu system
- Royalty-free TCP/IP stack with source code & PPP
- Samples/Libraries including Machine2ME Node Applications

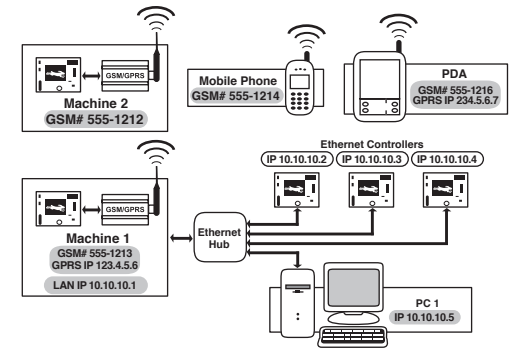
Applications:

- Wireless Embedded Control
- Alarms & Notification Systems
- Remote Device Monitoring
- Data and Event Logging
- Machine Communication



M2M Application Kit Specifications:

Feature	Serial-to-Ethernet Application Kit
Control Device and Display System	
Microprocessor Core Module	RCM3200 RabbitCore module
Microprocessor	Rabbit 3000 running at 44.2 MHz
Ethernet Connectivity	10/100Base-T, RJ-45
Memory	512K Flash, 512K SRAM (program). 256K SRAM (data)
General Purpose I/O	52 digital I/O, Auxiliary I/O Bus
Prototyping Board	RCM3200 Prototyping Board
Serial Ports	RS-232 (2 3-wire or 1 5-wire). Additional CMOS ports available on RCM3200
Display	122 x 32 Keypad/Display Unit with LCD menu system
GSM Modem	Wavecom Fastrack Dual Band GSM/GPRS modem (900/1900 MHz for US Kit, 900/1800 MHz for International Kit)
Antenna	Wave Device Antenna. 90˚ Adjustable Knuckle Antenna (1850-1990 MHz for US Kit, 870-960MHz for International Kit)
SIM Card (US Kits only)	T-Mobile SIM card (Activation required)
Software Development System	
Software Compiler	Z-World's Dynamic C 8.x with TCP/IP stack
Software Libraries	SMS/GPRS modes, Modem-specific Library
Additional Libraries	Dynamic C PPP module, Generic Modem Library, TCP/IP, SMTP, POP3, Telnet
Sample Programs	For SMS and GPRS communication and control Machine2ME components. FTP datalogging
Menuing System	For display of SMS and GPRS communications
Included Accessories	
Cables	Programming Cable for RCM 10-pin ® DB15 Conversion Cable Ethernet Crossover Cable
Documentation	M2M Applications Kit Getting Started Manual RCM3200 Getting Started Manual Full Documentation on CD
Power Supplies (US Kits Only)	9 V DC adapter for RCM3200 12 V DC, 1 Amp (min.) for GSM Modem. Power cable included.



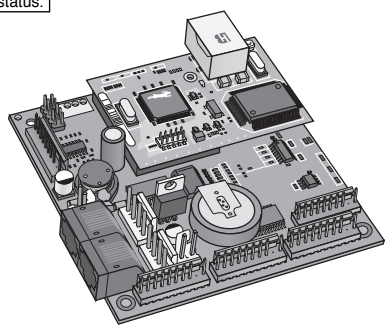
MOUSER STOCK NO.		Description	Price Each
Mfr.	Mfr. Part No.		
694—101-0721		M2M Application Kit	699.00

RABBIT Single Board Computers

Products may be RoHS compliant.
Check mouser.com for RoHS status.

BL2500 COYOTE

Gives OEM designers extremely low-cost embedded control for high-volume applications such as product control, factory equipment control, access control, HVAC, and vending machines. Two standard models—one with Ethernet, one without—feature the Rabbit 3000™ microprocessor at 29.4 MHz, with 256K Flash and 128K SRAM.



RoHS Compliant*

Complete Kits For New Users

MOUSER STOCK NO. Mfr.	MOUSER STOCK NO. Mfr. Part No.	Description	Price Each
812	20-101-0577	Jumpstart your evaluation and design efforts with a complete development kit, which includes BL2500 Coyote, demonstration board, Dynamic C development system and complete documentationon CD-ROM, serial cable for programming and debugging.	299.00

Product Only

* RoHS Compliant † Requires 1.27mm programming cable

*812—101-20-0575	BL2500 10Base-T Ethernet	189.00
812—101-0599	BL2500 with 512K/512K	209.00
812—20-101-0602	BL2500 with 10/100, 512K/512K, 44.2clk †	239.00
812—20-101-0576	BL2510 No Ethernet	149.00
812—101-0600	BL2510 with 512K/512K	179.00

Expansion Boards

*RoHS Compliant

812—101-0688	RabbitNet D/A Expansion Card	89.00
812—101-0617	RN1400 RabbitNet Relay Expansion Card	89.00
812—101-0616	RabbitNet A/D Expansion Card	89.00
*812—20-101-0612	RabbitNet Digital I/O Expansion Card	89.00
694—101-0467	8 Meg Serial Flash	119.00
812—101-0282	Universal Relay Board	99.00
*812—20-101-0879	RN1600 RabbitNet Keypad/Display Interface Card	69.00

Programming/Development Tools

*RoHS Compliant

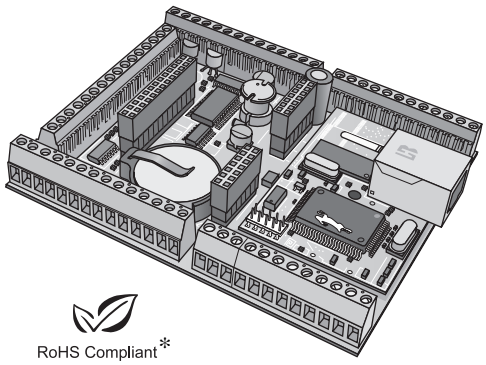
694—101-0666	Dynamic C Module	359.00
*694—20-101-0580	RabbitLink Card	129.00
694—101-0589	Rabbit Cloning Board	89.00
694—540-0070	RS-232-to-USB Converter Cable	39.00
538—63811-1000	Crimp Tool	39.00
*694—20-101-0542	1.27 mm Programming Cable	25.00
*812—20-101-0581	Connectivity Kit	18.00
812—101-0887	RN1600 RabbitNet Expansion Kit	149.00

Specifications:

Feature	BL2500	BL2510
Microprocessor	Rabbit 3000™ at 29.4 MHz	
Ethernet Port	10Base-T, RJ-45	N/A
Flash Memory	256K (standard)	
SRAM	128K (standard)	
LED's	4-User-programmable	
Digital Inputs	16: 15 protected to ±36 VDC, 1 protected to +5 –36V; threshold is 1.5 V nom.	
Digital Outputs	8, sink up to 200 mA each, 36 V DC max. standoff voltage	
Analog Inputs	One 10-bit resolution, 8-bit accuracy, input range 0.1–3.1 V, 10 samples/s	
Analog Outputs	Two 9-bit PWM, 0.1–3.1 VDC, 17ms settling time	
Serial Ports	6 serial ports: 1 RS-485, 2 RS-232 or one RS-232 (with CTS/RTS), 1 CMOS level asynchronous or clocked serial port, 1 expansion serial port multiplexed to two RS-422 clocked SPI ports, 1 CMOS compatible serial port for programming/debug	
Serial Rate	Max. async = CLK/8, Max. sync = CLK/2	
Real-Time Clock	Yes	
Timers	Ten 8-bit timers (6 cascadable from the first) and one 10-bit timer with 2 match registers	
Watchdog/Supervisor	Yes	
Power	8 – 40 V DC 1 W typical w/ no load	8 – 40 V DC 0.8 W typical w/ no load
Backup Battery	3 V lithium coin-type, 1000 mA•h, supports RTC & SRAM	
Operating Temperature	–40° to +70°C	
Humidity	5 – 95%, noncondensing	
Connectors	5 polarized 9-pin Molex® type terminals with 0.1" pitch, Two 4-pin 0.156" pitch Molex type, two 0.156" pitch 2-pin Molex type, two RJ-45, one 0.1" pitch 2x5 IDC, one 2 mm pitch 2x5 IDC programming port	
Board Size	3.95" x 3.95" x 1.16" (100 x 100 x 29 mm)	3.95" x 3.95" x 0.80" (100 x 100 x 20 mm)

BL2100 SMARTCAT

Designed for medium-scale control and monitoring applications, the Smartcat is a high-performance single-board computer that gives OEM designers Ethernet and keypad/display options all in one low-cost package. The Smartcat offers plenty of sinking/sourcing digital I/O with A/D and D/A, providing comprehensive integrated control capabilities in a compact 4.14" x 3.41" (105 x 87 mm) form factor. Ethernet models are ideal for remotely monitoring and supervising another programmable system or web-enabling new or existing products. The Ethernet interface is fully supported by software to enable network and Internet connectivity.



RoHS Compliant*

Specifications:

* 13–36 V DC supply voltage required

Feature	BL2100	BL2110	BL2120	BL2130
Microprocessor	Rabbit 2000™ @ 22.1 MHz			
Ethernet Port	10Base-T, RJ-45, link and activity LEDs		None	
Flash	256K			
SRAM	128K			
Backup Battery	Socketed 3-V lithium coin-type, 265 mA•h, supports RTC and SRAM			
Keypad/Display	See keypad/display options and our "OP" products (for serial display options)			
Digital Inputs	24: protected to ± 36 VDC			
Digital Outputs	16: source/sink 200 mA each, 36 VDC max.			
Analog Inputs	11 at 1 MΩ, 12-bit resolution, ±10 VDC, up to 4,100 samples/sec	None	11 at 1 MΩ, 12-bit resolution, ±10 VDC, up to 4,100 samples/sec	None
Analog Outputs	Four 12-bit resolution, 0-10 VDC*, update rate 12kHz	None	Four 12-bit resolution, 0-10 VDC*, update rate 12kHz	None
Serial Ports	4 total: two 3-wire (or one 5-wire) RS-232, 1 RS-485, and one 5 V CMOS-compatible (programming)			
Serial Rate	Max. burst rate = CLK/32 Max. sustained rate= burst/2			
Connectors	Screw terminals support max. 14 AWG/1.5 mm2			
Real-Time Clock	Yes			
Timers	Five 8-bit timers (four cascadable from the first) and one 10-bit timer with 2 match registers			
Watchdog/Supervisor	Yes			
Power	9–36 VDC, 1.5 W max. (without display), 3 W max. (with display)			
Operating Temp	–40°C to +70°C			
Humidity	5–95%, non-condensing			
Board Size	4.14" x 3.41" x 0.93" (105 x 87 x 24 mm)			

Tool Kit

MOUSER STOCK NO. Mfr.	MOUSER STOCK NO. Mfr. Part No.	Description	Price Each
812	101-0482	SmartCat Tool Kit (board not included)	200.00

Product Only

*RoHS Compliant

*812—20-101-0461	BL2100 Analog and Ethernet	339.00
*812—20-101-0568	BL2100 with 512K/512K	379.00
*812—20-101-0567	BL2100 IDC Headers	364.00
812—101-0790	BL2100 IDC Headers, 512K Flash	404.00
812—101-0566	BL2100 Friction Lock Connectors	379.00
812—101-0818	BL2100 Friction Lock Connectors, 512K Flash	404.00
812—101-0565	BL2100 Bottom Mount Sockets	379.00
812—101-0568	BL2100 512K/512K	379.00
812—101-0531	BL2101 0-10V A/D	339.00
812—20-101-0573	BL2101 512K/512K	379.00
812—101-0697	BL2102 Bottom Mount Connectors	379.00
812—101-0462	BL2110 Ethernet, no Analog	249.00
812—101-0551	BL2110 IDC Headers	274.00
812—101-0550	BL2110 Friction Lock Connectors	274.00
812—101-0851	BL2110 Friction Lock Connectors, 512K/512K	314.00
812—101-0549	BL2110 Bottom Mount Sockets	289.00
812—101-0572	BL2110 512K Flash	289.00
*812—20-101-0463	BL2120 Analog, no Ethernet	299.00
812—101-0571	BL2120 IDC Headers	324.00
812—101-0570	BL2120 Friction Lock Connectors	324.00
*812—20-101-0569	BL2120 Bottom Mount Sockets	339.00
812—101-0464	BL2130 No Analog, no Ethernet	209.00
812—101-0548	BL2130 IDC Headers	234.00
812—101-0547	BL2130 Friction Lock Connectors	234.00
812—101-0546	BL2130 Bottom Mount Connectors	249.00

Product Options and Accessories

*RoHS Compliant

694—101-0666	Dynamic C Module	359.00
694—101-0589	Rabbit Cloning Board	89.00
*694—20-101-0513	2mm Programming Cable	25.00
812—101-0106	24VDC/110 Power Supply	15.00

Expansion Boards

*RoHS Compliant

*694—20-101-0467	8 Meg Serial Flash	89.00
812—101-0282	Universal Relay Board	99.00

Mounting/Display

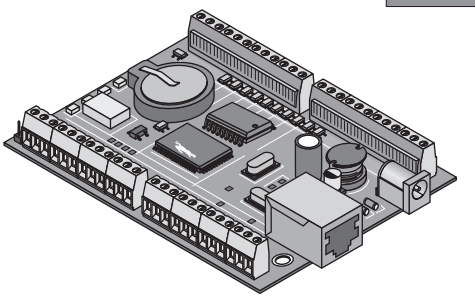
*RoHS Compliant

*694—20-101-0465	Keypad/Display Unit	79.00
812—151-0127	Panel-Mount Keypad/Display Unit	99.00
812—101-0466	Keypad/Display Unit w/Case	99.00
694—540-0066	Keypad/Display Unit Cable 20'	15.00
812—101-0495	Baseplate	10.00

RABBIT Single Board Computers

BL2000 WILDCAT

The Wildcat gives OEM designers optional Ethernet connectivity in a low-cost, high-performance single-board computer. These compact boards are rich with the digital I/O, A/D, and D/A designers need for embedded control and monitoring applications, and the Wildcat's compact board size of 4.15" x 3.43" (105 x 87 mm) allows for easy integration. Ethernet models are ideal for remotely monitoring and supervising another programmable system or web-enabling new or existing products.



Tool Kit

MOUSER STOCK NO. Mfr.	MOUSER STOCK NO. Mfr. Part No.	Description	Price Each
812	101-0472	Wildcat Tool Kit (board not included)	200.00

Product Only ✻RoHS Compliant

812—101-0430	BL2000 Ethernet, Analog I/O	249.00
812—101-0556	BL2000 IDC Headers	274.00
812—101-0843	BL2000 IDC Headers, 512K SRAM	334.00
812—101-0555	BL2000 Friction Lock Connectors	274.00
812—101-0840	BL2000 Friction Lock Connectors, 512K SRAM	334.00
812—101-0841	BL2000 Friction Lock Connectors, 512K/512K	374.00
812—101-0842	BL2000 Friction Lock Connectors, 512K Flash	314.00
812—101-0554	BL2000 Bottom Mount Sockets	289.00
812—101-0835	BL2000 512K Flash	289.00
✻812—20-101-0455	BL2010 Ethernet, Analog inputs only, 2 extra dual purpose	199.00
✻812—20-101-0592	BL2010 IDC Headers	224.00
✻812—20-101-0591	BL2010 Friction Lock Connectors	224.00
812—101-0590	BL2010 Bottom Mount Sockets	239.00
✻812—20-101-0456	BL2020 No Ethernet, Analog I/O	209.00
812—101-0595	BL2020 IDC Headers	234.00
✻812—20-101-0594	BL2020 Friction Lock Connectors	234.00
812—101-0593	BL2020 Bottom Mount Connectors	249.00
✻812—20-101-0457	BL2030 No Ethernet, Analog inputs only, 2 extra dual	159.00
812—101-0817	BL2030 512K SRAM	219.00
812—101-0598	BL2030 IDC Headers	184.00
812—101-0597	BL2030 Friction Lock Connectors	184.00
812—101-0596	BL2030 Bottom Mount Connectors	199.00

Programming/Development Tools

694—101-0666	Dynamic C Module	359.00
694—101-0580	RabbitLink Card	129.00
694—101-0589	Rabbit Cloning Board	89.00
694—540-0070	RS-232 to-USB Converter Cable	39.00

Expansion Boards

694—101-0467	8 Meg Serial Flash	89.00
812—101-0282	Universal Relay Board	99.00

Mounting/Display

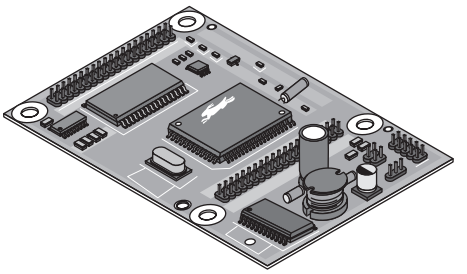
812—101-0431	Unibox Enclosure	15.00
812—151-0075	Light Pipes	5.00
812—101-0495	Baseplate	10.00

Specifications:

Feature	BL2000	BL2010	BL2020	BL2030
Microprocessor	Rabbit 2000 at 22.1 MHz			
Ethernet Port	10Base-T, RJ-45, link and activity LEDs		None	
Flash Memory	256K			
SRAM	128K			
Backup Battery	Socketed 3 V lithium coin-type, 265 mA·h, supports RTC and SRAM			
Keypad/Display	See our "OP" products for serial display options			
Digital Inputs	11: protected to ±36 VDC			
Digital Outputs	8: sink 200 mA, 2: sink 750 mA, 40 VDC max.			
Analog Inputs	Four 12-bit resolution 1 MW, ±10 VDC, up to 4,000 samples/sec.	Four 10-bit resolution 1 MW, ±10 VDC, up to 4,000 samples/sec.	Four 12-bit resolution 1 MW, ±10 VDC, up to 4,000 samples/sec.	Four 10-bit resolution 1 MW, ±10 VDC, up to 4,000 samples/sec.
Analog Outputs	Two 12-bit resolution, 0–4 VDC, update rate 12 kHz	None	Two 12-bit resolution, 0–4 VDC, update rate 12 kHz	None
Dual Purpose Analog or Digital Inputs	5 at 12 kW, 12-bit resolution, 0–48 VDC	7 at 12 kW, 10-bit resolution, 0–48 VDC	5 at 12 kW, 12-bit resolution, 0–48 VDC	7 at 12 kW, 10-bit resolution, 0–48 VDC
Relay Outputs	SPDT, 1 A @ 30 VDC, 0.3 A @ 120 VAC Uses 1 digital output			
Serial Ports	4 total: two 3-wire (or one 5-wire) RS-232, 1 RS-485, and one 5 V CMOS-compatible (programming)			
Serial Rate	Max. burst rate = CLK/32 Max. sustained rate = burst/2			
Connectors	Screw terminals support max. 14 AWG/1.5 mm2			
Real-Time Clock	Yes			
Timers	Five 8-bit timers (four cascadable from the first) and one 10-bit timer with 2 match registers			
Watchdog/Supervisor	Yes			
Power	9–40 VDC or 24 VAC ±10%, 1.5 W max., power jack			
Operating Temp	–40°C to 70°C			
Humidity	5–95%, non-condensing			
Board Size	3.43" x 4.15" x 0.82" (87 x 105 x 21 mm)			
Enclosure Size	4.9" x 5.6" x 1.1" (124 x 142 x 28 mm)			
LED's	8 total: Power On, Microprocessor Error, Ethernet Link, Ethernet Activity, 4 output status		6 total: Power On, Microprocessor Error, 4 output status	

BL1800 JACKRABBIT

The Jackrabbit is RABBIT's most compact and lowest cost C-programmable single-board computer. The Jackrabbit is the perfect solution for applications that have significant cost and size constraints but need a dependable SBC. Fast number crunching is provided by a Rabbit 2000 microprocessor operating at up to 29.5 MHz.



Specifications:

Feature	BL1800	BL1810	BL1820
Microprocessor	Rabbit 2000 @ 29.5 MHz	Rabbit 2000 @ 14.7 MHz	
Flash	256K	128K	
SRAM	128K		
Backup Battery	3 V lithium coin-type, 950 mA·h, supports RTC and SRAM		None
Keypad/Display	See our "OP" products for serial display options		
Digital Inputs	6 CMOS-compatible		7 CMOS-compatible
Digital Outputs	8 total: 4 CMOS-compatible, 3 sink up to 1 amp each, 1 sources up to 0.5 amps, 30 VDC max.	8 total: 4 CMOS-compatible, 3 sink up to 200 mA each, 1 sources up to 100 mA, 30 VDC max.	9 total: 5 CMOS-compatible, 3 sink up to 200 mA each, 1 sources up to 100 mA, 30 VDC max.
Configurable I/O	14 total CMOS-compatible: 8 bytewide and 6 by bit		15 total CMOS-compatible: 8 bytewide and 7 by bit
Analog Inputs	One 9-bit resolution, 8-bit accuracy, 0.1–2.8 V input range, 10 samples/sec.		
Analog Outputs	Two 9-bit PWM, one 0.1–2.8 VDC, one 0.7–3.5 VDC, update rate 50 Hz		
Serial Ports	4 total: two 3-wire (or one 5-wire) RS-232, one RS-485, and one 5 V CMOS-compatible (programming). 2 configurable as sync.		4 total: two 3-wire (or one 5-wire) RS-232 and two 5 V CMOS-compatible (1 programming). 2 configurable as sync.
Serial Rate	Max. burst rate = CLK/32 (async) Max. sustained rate = burst/2		
Connectors	Two 2 x 20, 2 mm IDC headers		
Real-Time Clock	Yes		
Timers	Five 8-bit timers (four cascadable from the first) and one 10-bit timer with 2 match registers		
Watchdog/Supervisor	Yes		
Power	8–40 VDC, 1.2 W max.	7.5–25 VDC, 100 mA	
Operating Temp	–40°C to +70°C		
Humidity	5–95%, non-condensing		
Board Size	3.50" x 2.50" x 0.94" (89 x 64 x 24 mm)		

Development Kit ✻RoHS Compliant

MOUSER STOCK NO. Mfr.	MOUSER STOCK NO. Mfr. Part No.	Description	Price Each
812	101-0363	Jackrabbit Development Kit	139.00
✻812	20-101-0356	BL1800	99.00
812	101-0558	BL1800 512K SRAM	159.00
✻812	20-101-0357	BL1810	69.00
812	101-0814	BL1810 512K SRAM	129.00
812	101-0358	BL1820	49.00

Programming/Development Tools ✻RoHS Compliant

694—101-0666	Dynamic C Module	359.00
✻694—20-101-0580	RabbitLink Card	129.00
694—101-0589	Rabbit Cloning Board	89.00
812—101-0343	BL1800 Prototyping Board	59.00
✻694—20-101-0513	2mm Programming Cable	25.00
694—540-0070	RS-232-to-USB Converter Cable	39.00
694—151-0113	Connector Adapter Board	15.00

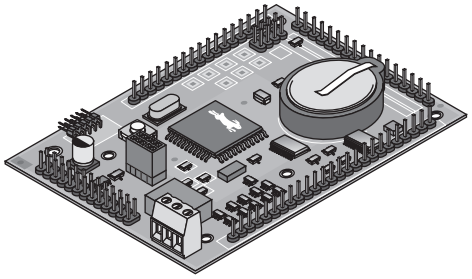
Expansion Boards ✻RoHS Compliant

✻694—20-101-0467	8 Meg Serial Flash	89.00
812—101-0282	Universal Relay Board	99.00

RABBIT Single Board Computers

LP3500 FOX

The LP3500 Fox is a low-power single-board computer designed to operate reliably virtually any place it is deployed, especially where power is limited, such as in portable, hand-held, battery-powered, and remote monitoring systems. The LP3500 features built-in analog and digital I/O and consumes less than 20 mA when fully operational and less than 100 µA in power-save mode.



Specifications:

Feature	LP3500	LP3510
Microprocessor	Low-EMI Rabbit 3000™ at up to 7.4 MHz	
Flash	512K (2 x 256K)	256K
SRAM	512K (2 x 256K)	128K
Backup Battery	Socketed 3 V lithium coin-type, 265 mA·h, supports RTC and SRAM	
Keypad/Display	Optional keypad/display module with 7 keys and 122 _ 32 graphic display, easy to use menuing software	
Digital Inputs	16 protected to ±36 V DC	
Digital Outputs	10 total: 8 sink and 2 source 200 mA each, 36 V DC max.	
Relay	1 SPDT, 1 A, 30 V DC, bi-stable	None
Analog Inputs	Eight 11-bit single-ended or four 12-bit differential, 1MW input impedance, up to 200 samples/sec. Multiple software-controlled programmable gain voltage ranges from 0-1 V to 0-20 V. 4 channels can be set individually for 4-20mA with plug-in jumpers 1 channel has software-selectable power voltage monitoring option	None
Analog Outputs	Unfiltered PWM, 1 kW output impedance	None
Serial Ports	6 total: 1 RS-485 3 RS-232 (three 3-wire OR one 5-wire and one 3-wire 1 logic level serial interface for optional add-ons 1 3 V CMOS-compatible (programming)	
Serial Rate	Max. asynchronous baud rate = CLK/8	
Real-Time Clock	Yes	
Timers	Ten 8-bit timers (6 cascadable from the first) and one 10-bit timer with 2 match registers	
Watchdog/Supervisor	Yes	
Main Power	3–30 V DC, 20 mA max. @ 7.4 MHz, 100 µA max. @ 2 kHz	
Backup Power	Used to reduce current in power-save mode, 2.7–3.3 V @ 100µA max	
Operating Temp	–40° to +70°C	
Humidity	5–95%, noncondensing	
I/O Connectors	Two 1 _ 17, 0.1" pitch headers	
Board Size	3.65" _ 2.60" _ 0.45" (93 x 66 x 11 mm)	

Tool Kit

MOUSER STOCK NO. Mfr.	Mfr. Part No.	Description	Price Each
812—101-0529		Fox Tool Kit (board not included)	230.00

Product Only

812—20-101-0525	512K/512K Analog inputs, Relay - RoHS	199.00
812—101-0526	256K/128K	149.00

Programming/Development Tools

694—101-0666	Dynamic C Module	359.00
812—101-0545	Screw Terminal Adapter/Prototyping Board	99.00
694—101-0580	RabbitLink Card	129.00
694—101-0589	Rabbit Cloning Board	89.00
694—540-0070	RS-232-to-USB Converter Cable	39.00

Expansion Boards

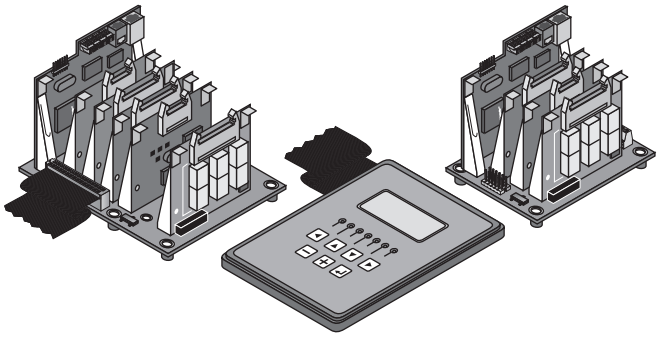
694—20-101-0467	8 Meg Serial Flash - RoHS	89.00
812—101-0282	Universal Relay Board	99.00

Mounting/Display

812—101-0466	Keypad/Display Unit	99.00
694—20-101-0541	Panel-Mnt Keypad/Display Unit, 3.3 Volt - RoHS	99.00
694—20-101-0502	Panel-Mount Keypad/Display Unit, 5 Volt - RoHS	99.00
812—540-0069	Keypad/Display Unit Cable 5"	15.00
812—101-0431	Unibox Enclosure	15.00
812—101-0495	Baseplate	10.00

SR9000 SMART START SYSTEM

The Smart Start is a modular and expandable embedded control system designed for demanding real-time control and data acquisition applications. Multiple I/O card options--including digital, A/D, D/A, and relays--allow users to closely match their specific I/O needs. The Smart Star CPU card comes in both Ethernet and non-Ethernet versions, and a cost-effective keypad/display is also available.



Ethernet connectivity - CPU card with or without Ethernet
Flexible functionality - modular configuration to easily interchange or replace individual I/O cards
Multiple I/O card options - digital I/O, A/D, D/A, relay
Expandable - up to 168 I/O
Cost-effective - low cost per I/O
Optional keyboard/display - backlit 122 x 32 pixel graphic LCD with 7 user-relegendable keys, 7 LEDs

Tool Kit

MOUSER STOCK NO. Mfr.	Mfr. Part No.	Description	Price Each
812—101-0427		Smart Start Tool Kit (board not included)	200.00

Smart Start Backplane

812—20-101-0512	SR9010 7-slot - RoHS	99.00
812—101-0487	SR9050 3-slot	79.00

Keyboard/Display Options

694—20-101-0601	Keypad/Display Unit, 3.3 Volt, No Case - RoHS	79.00
694—101-0465	Keypad/Display Unit, 5 Volt, No Case	79.00

Product Options and Accessories

812—101-0504	Cable and Mounting Hardware	20.00
812—540-0069	Keypad/Display Unit Cable 5"	15.00
812—151-0127	Connector Adapter Board	40.00

Smart Start CPU Card

812—101-0387	SR9100	99.00
812—101-0815	SR9100 512K SRAM	159.00
812—20-101-0486	SR9150 Ethernet - RoHS	159.00
812—20-101-0738	SR9150 Ethernet, 512K SRAM - RoHS	179.00
812—101-0506	SR9160	119.00
812—101-0775	SR9160 512K SRAM	179.00

Programming/Development Tools

694—101-0580	RabbitLink Card	129.00
694—101-0589	Rabbit Cloning Board	89.00
694—540-0070	RS-232-to-USB Converter Cable	39.00

Smart Start Digital I/O Cards

MOUSER STOCK NO. Mfr.	Mfr. Part No.	Description	Price Each
812—101-0389		16 inputs and 8 outputs, sinking	49.00
812—20-101-0437		16 inputs and 8 outputs, sourcing - RoHS	49.00
812—20-101-0390		8 inputs and 16 outputs, sinking - RoHS	49.00
812—101-0391		8 inputs and 8 outputs, sinking	49.00

Smart Start A/D Cards

812—101-0392	Eleven 12-bit analog inputs (0-10V)	79.00
812—101-0423	Eleven 12-bit analog inputs (±10V)	79.00
812—20-101-0444	Eleven 12-bit analog inputs (4-20mA) - RoHS	79.00

Smart Start D/A Cards

812—101-0393	Eight 12-bit analog outputs (0-10V)	129.00
812—101-0394	Eight 12-bit analog outputs (±10V)	149.00
812—20-101-0445	Eight 12-bit analog outputs (4-20mA) - RoHS	129.00

Smart Start Relay Cards

812—101-0395	6 relays: 1SPDT, 5 SPST, including snubbers	79.00
812—20-101-0440	8 SPDT relays, no on-board snubbers - RoHS	79.00

Smart Start Field Wiring Terminals

812—20-101-0515	Screw-type (A/D, D/A) - RoHS	19.00
812—101-0421	Pluggable (A/D, D/A)	29.00
812—101-0514	Screw-type (I/O, Relay 8)	19.00
812—101-0420	Pluggable (I/O, Relay 8)	39.00
812—101-0516	Screw-type (Relay 6)	19.00
812—101-0422	Pluggable (Relay 6)	29.00

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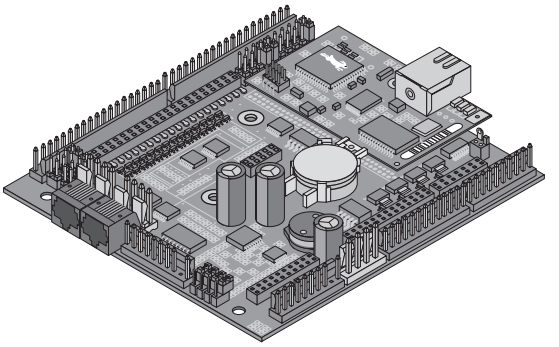
RABBIT Single Board Computers and Software

BL2600 WOLF - MODELS BL2600, BL2610

The BL2600 Wolf single-board computer provides embedded systems engineers a complete and expandable performance package. Two standard models-one with 10/100 Ethernet and one without 10/100 Ethernet - feature the Rabbit 3000® microprocessor at 44.2 and 29.4 MHz respectively, with at least 512K Flash and 512K SRAM (standard).

Programming the BL2600
Programs are developed and debugged using industry-proven Dynamic C® software, which runs on a Windows PC. The programming device is connected via a serial cable, a USB cable, or Ethernet. Comprehensive debugging support includes break points, watch expressions and many other extensive features oriented toward real-time embedded systems programming. An extensive library of drivers and sample programs is provided, including a royalty-free TCP/IP stack for network and Internet communications. Full source code is provided for most library routines.



BL2600 Specifications & Features

Feature	BL2600	BL2610
Microprocessor	Rabbit 3000™ at 44.2 MHz	Rabbit 3000™ at 29.4 MHz
Ethernet Port	10/100Base-T, 3 LEDs	None
Flash Memory	512K (standard)	
SRAM	512K Program Execution, 256K Data	512K (standard)
Backup Battery	Panasonic CR2477 or equivalent 3 V lithium coin type, 950 mAh, socket mounted	
Configurable I/O	16: Individually software configurable digital inputs @ ±36 V DC, 1.5 V switching threshold, or sinking digital outputs up to 40 V, 200 mA each	
Digital Inputs	16: Hardware-configurable pull-up or pull-down, ±36VDC, switching threshold 1.4 V typ.	
High-Current Digital Outputs	4: Individually software configurable, +40 V DC, 2 A max. per channel, sinking or sourcing	
Analog Inputs	8 channels with 11-bit resolution, software selectable ranges Unipolar: 1, 2, 2.5, 5, 10, 20 V DC; Bipolar: ±1, ±2, ±5, ±10 VDC; Four of the eight channels maybe hardware-configured for 4-20 mA, 12 kHz update rate	
Analog Outputs	4 channels, 12-bit resolution, buffered (0-10 V DC, ± 10 V DC), 4-20 mA, 12 kHz update rate	
RabbitNet	Compatible Expansion Cards: Digital I/O, A/D, D/A, Relay, Keypad Display Interface	
Serial Ports	Up to 5 serial ports: • 1 RS-485 or 1 RS-232 • 2 RS-232 or one RS-232 (with CTS/RTS) • 1 clocked serial port multiplexed to 2 RS-422 SPI master ports • 1 CMOS compatible serial port for programming/debug	
Serial Rate	Max. async = CLK/8, Max. sync = CLK/2	
Real-Time Clock	Yes	
Timers	Ten 8-bit timers (6 cascadable from the first) and one 10-bit timer with 2 match registers	
Watchdog/Supervisor	Yes	
Power	9/36 V DC, 25 W max. (includes power to RabbitNet expansion boards)	
Operating Temperature	-40° to +70°C (-40° to +85°C without battery)	
Humidity	5-95%, noncondensing	
Connectors	One Ethernet and two RabbitNet™ RJ-45 connectors Two polarized, 9-position with 0.1" pitch friction-lock connectors Three 4-position power terminals with 0.156" pitch friction-lock connectors Two 20-position terminals with 0.1" pitch (and 2 x 20 IDC headers) friction-lock connectors One 13-position terminal with 0.1" pitch (and 2 x 13 IDC header) friction-lock connector One 10-position terminal with 0.1" pitch (and 2 x 7 IDC header) friction-lock connector One 2 x 5 IDC, 1.27 mm pitch (BL2600) programming port One 2 x 5 IDC, 2 mm pitch (BL2610) programming port	
Board Size	4.85" x 4.96" x 1.00" (123 x 126 x 25 mm)	

For quantities of 5 and up, call for quote.

MOUSER STOCK NO. Mfr.	MOUSER STOCK NO. Mfr. Part No.	Description	Price Each
BL2600 Wolf Board			
812	20-101-0889	BL2600 Board w/ 10/100Base-T Ethernet - RoHS	289.00
812	20-101-0891	BL2610 Board w/o 10/100Base-T Ethernet - RoHS	269.00
Product Accessories			
812	20-101-0879	RN1600 RabbitNet Keypad/Dsply Interface Card-RoHS	69.00
812	101-0617	RN1400 RabbitNet Relay Expansion Card	89.00
812	101-0688	RN1300 RabbitNet D/A Expansion Card	89.00
812	101-0616	RN1200 RabbitNet Digital I/O Expansion Card	89.00
812	101-0612	RN1100 RabbitNet Digital I/O Expansion Card	89.00
694	20-101-0468	SF1000 4MB Serial Flash Expansion - RoHS	79.00
694	101-0467	SF1000 8MB Serial Flash Expansion	89.00
812	101-0282	SE1100 Parallel Relay Board	99.00
694	20-101-0580	RabbitLink Card for Remote Debug via Ethernet/Internet - RoHS	129.00
694	101-0589	Rabbit Cloning Board to Copy Compiled Software Board to Board	89.00
694	540-0070	RS-232-to-USB Converter Cable for USB only PCs	39.00
694	101-0542	1.27mm Connector for 10/100Base-T Option	25.00
812	101-0581	Connectivity Kit	18.00

DYNAMIC C® 9 SOFTWARE

Dynamic C® is an integrated C compiler, editor, loader, and debugger designed specifically for Rabbit microprocessor-based products. The Dynamic C integrated development environment provides a platform for developing applications quickly for fast time to market. Since 1990, Z-World's effective integration of hardware and software has helped design engineers develop thousands of successful OEM products.

Dynamic C's enhancements to standard C facilitate real-time programming on powerful embedded systems. Language extensions include constructs for cooperative and preemptive multi-tasking and protecting writes to variables during power failures. Libraries for standard C functions, board-specific peripheral drivers, chip peripherals, and other features are included in source code format. Assembly language programming is fully supported, and Assembly code is easily mixed with C code for time-critical applications.

Developing software with Dynamic C is simple. Users can write, compile, and test C and Assembly code without leaving the Dynamic C development environment. Debugging occurs while the application runs on the target. Alternatively, users can compile your program to an image file for later loading. Dynamic C runs on PCs under Windows 95, 98, 2000, NT, ME, and XP. Programs are downloaded at baud rates of up to 460,800 bps while the program compiles.

TCP/IP Libraries

Dynamic C includes extensive TCP/IP libraries and sample programs that serve as application templates for fast program development

Standard Modules: TCP/IP Libraries and Sample Programs
HTTP — Hypertext Transfer Protocol. Protocol for web browsers and servers to transfer files, such as text and graphics. Contains facilities for Server Side Includes (SSI) and CGI routines.
POP3 — Post Office Protocol. Standard protocol to retrieve e-mail.
TFTP — Trivial File Transfer Protocol. Simplified version of FTP that allows files to be transferred from one computer to another over a network file transfers between network nodes.
SMTP — Simple Mail Transfer Protocol. Internet protocol providing e-mail services.
DHCP — Dynamic Host Configuration Protocol. A method for a device to assign its network configuration information from a central server.
Socket-Level UDP — User Datagram Protocol. Protocol exchanging datagrams without acknowledgements or guaranteed delivery.
Socket-Level TCP — Transmission Control Protocol. Reliable full-duplex data transmission.
ICMP — Internet Control Message Protocol. Network protocol to verify connecting to another host. (PING)

Standard Features

- Full-feature source and/or Assembly-level debugger, no in-circuit emulator required.
- Royalty-free TCP/IP stack with source code and most common protocols.
- Hundreds of functions in source-code libraries and sample programs
- Exceptionally fast support for floating-point arithmetic and transcendental functions
- RS-232 and RS-485 serial communications
- Analog and digital I/O drivers
- I2C, SPI, GPS, file system
- LCD display and keypad drivers
- Powerful language extensions for cooperative or preemptive multi-tasking
- Loader utility program to load binary images into Z-World targets in the absence of Dynamic C
- Create your own source code libraries and augment on-line help by creating "function

Standard Debugging Features

Breakpoints - Set breakpoints that can optionally disable interrupts.
Single-stepping - Step into or over functions at a source or machine code level — uC/OS-II aware.
Code disassembly - The disassembly window displays addresses, opcodes, mnemonics, and machine cycle times. Switch between debugging at machine code level and source code level by simply opening or closing the disassembly window.
Watch expressions - Watch expressions are compiled when defined, so complex expressions including function calls may be placed into watch expressions. Watch expressions can be updated with or without stopping program execution.
Register window - All processor registers and flags are displayed. The contents of general registers may be modified in the window by the user.
Stack window - Shows the contents of the top of the stack.
Hex memory dump - Displays the contents of memory at any address.
STUDIO window - print outputs to this window, and keyboard input on the host PC can be detected for debugging purposes. Print output may also be sent to a serial port or file.

Dynamic C 9 Promotional Bundle – Limited Time Offer

Dynamic C 9 Promotional Bundle: Includes Dynamic C 9, SSL, FAT, RabbitWeb, PPP, SNMP, and AES software modules. $1304 if purchased separately

MOUSER STOCK NO. Mfr.	MOUSER STOCK NO. Mfr. Part No.	Description	Price Each
694	101-0987	Dynamic C 9 Promotional Bundle: Includes Dynamic C 9, SSL, FAT, RabbitWeb, PPP, SNMP, and AES software modules. ($1304 if purchased separately)	499.00
694	101-0981	Dynamic C 9 CD : Individual license (included in all Development Kits and Tool Kits).	210.00
694	101-0658	AES Module add-on for Dynamic C	159.00

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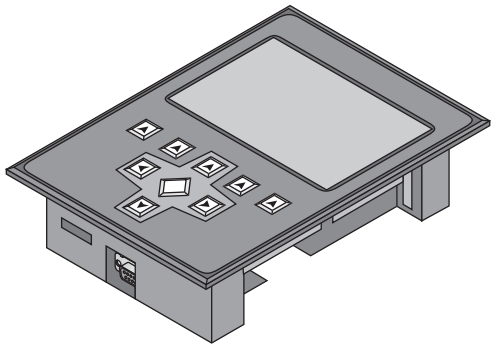
RABBIT Single Board Computers

OP7200 EDISPLAY

The OP7200 eDisplay is an intelligent operator interface that offers rugged I/O, built-in Ethernet connectivity, and optional A/D and touchscreen capabilities. The compact eDisplay is an ideal data acquisition and display device for OEM products and stand-alone systems such as factory floor controls. The unit's 10Base-T Ethernet facilitates remote diagnostics, control, and communication, including sending and receiving E-mails and alerts.



Specifications:

Feature	OP7200	OP7210
Microprocessor	Rabbit 2000™ at 22.1 MHz	
Ethernet Port	10Base-T, RJ-45	
Flash	256K	
SRAM	128K	
Backup Battery	Socketed 3 V lithium coin-type, 265 mA·h, supports RTC and SRAM, connection for user-supplied external battery	
Keypad/Display	1/4 VGA (320 _ 240 pixels) with programmable on/off white LED backlight, 9-key tactile feedback keypad	
	4096 x 4096 analog touchscreen	No touchscreen
LEDs	4: Power On, Microprocessor Error, Ethernet Link Alive, Ethernet Activity	
Digital Inputs	19 protected to ±36 VDC	16 protected to ±36 VDC
Digital Outputs	8: individually configurable in software; sink up to 350 mA, source up to 250 mA, or tri-state; 40 VDC max.	
Analog Inputs	Eight 11-bit single-ended or four 12-bit differential, 200 kW input impedance, 2.5 ksamples/sec. Eight software-controlled programmable gain/voltage ranges from 0–1 V to 0–20 V.	None
Serial Ports	4 CMOS-compatible: 1 RS-485 (or I/O expansion port), 2 RS-232 (one 5-wire or two 3-wire), One 5V CMOS-compatible (programmable)	
Serial Rate	Max. burst rate = CLK/32, Max. sustained rate = CLK/64	
Real-Time Clock	Yes	
Timers	Five 8-bit timers (4 cascadable from the first) and one 10-bit timer with 2 match registers	
Watchdog/Supervisor	Yes	
Power	9–40 VDC or 24 VAC, 4 W max.	
Operating Temp	–10° to +65°C	
Humidity	20–70%, noncondensing	
I/O Connectors	Screw terminals support max. 14 AWG/1.5 mm2 (standard)	
Product Size	5.67" x 4.41" x 1.70" (144 x 112 x 43 mm)	
Display Area	3.0" x 2.2" (76 x 56 mm)	

Tool Kit

MOUSER STOCK NO. Mfr.	Mfr. Part No.	Description	Price Each
812—101-0543		OP7200 Tool Kit (board not included)	200.00

Product Only

812—101-0535	Touchscreen	449.00
812—101-0537	Touchscreen 512K/512K	489.00
812—20-101-0536	OP7210, RoHS	399.00
812—101-0538	OP7210 512K/512K	439.00

Expansion Boards

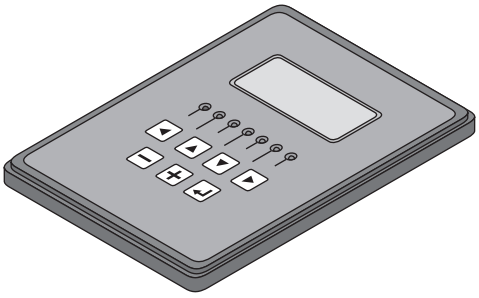
812—101-0688	RabbitNet D/A Expansion Card	89.00
812—101-0617	RN1400 RabbitNet Relay Expansion Card	89.00
812—101-0616	RabbitNet A/D Expansion Card	89.00
812—20-101-0612	RabbitNet I/O Expansion Card, RoHS	89.00
694—101-0467	8 Meg Serial Flash	89.00
812—101-0282	Universal Relay Board	99.00
812—20-101-0879	RN1600 RabbitNet Relay Keypad/Display, RoHS Interface Card	69.00

Programming/Development Tools

694—101-0666	Dynamic C Module	359.00
694—540-0070	RS-232-to-USB Converter Cable	39.00
694—101-0580	RabbitLink Card	129.00
694—101-0589	Rabbit Cloning Board	89.00
812—101-0887	RN1600 RabbitNet Expansion Kit	149.00

OP6800 MINICOM

The MiniCom is a low-cost, C-programmable operator interface and single-board computer that offers Ethernet connectivity, plenty of industrialized I/O, a graphic LCD, and keypad. The MiniCom's compact 4.5" x 3.6" (112 x 91 mm) form factor makes it ideal for use in designs and areas with size constraints. Available in both Ethernet-enabled and non-Ethernet versions, the MiniCom provides comprehensive integrated control, display, and networking capabilities via Internet/Ethernet or serial communications.



Specifications:

Feature	OP6800	OP6810
Microprocessor	Rabbit 2000 at 22.1 MHz	
Ethernet Port	10Base-T, RJ-45	None
Flash	256K	128K
SRAM	128K	128K
Backup Battery	Connection for user-supplied battery (to support RTC and SRAM)	
Keypad/Display	122 x 32 pixel graphic LCD in two stacked sections (with programmable backlight), user-relegendable keypad with 7-key / 7-LED interface	
LEDs	7 hardware- or software-driven: 1 red, 4 green, 2 yellow	
Digital Inputs	13 total: 8 protected to ±36 VDC, 5 protected to ±25 VDC	
Digital Outputs	11 total: sink 200 mA, 40 VDC max., 4 with built-in inductive load-protection diode	
Serial Ports	4 total: two 3-wire or one 5-wire RS-232, 1 RS-485, and one 5 V CMOS-compatible (programming)	
Serial Rate	Max. burst rate = CLK/32 Max. sustained rate = burst/2	
Connectors	2 x 20, 0.1" pitch ribbon-cable header	
Real-Time Clock	Yes	
Timers	Five 8-bit timers (four cascadable from the first) and one 10-bit timer with 2 match registers	
Watchdog/Supervisor	Yes	
Power	9–36 VDC, 1.5 W max.	
Operating Temp	0–50°C	
Humidity	5–95%, non-condensing	
Product Size	4.5" x 3.6" x 1.33" (112 x 91 x 33 mm)	

Tool Kit

MOUSER STOCK NO. Mfr.	Mfr. Part No.	Description	Price Each
812—101-0500		MiniCom Tool Kit (board not included)	200.00

Product Only

812—101-0492	OP6800	249.00
812—20-101-0654	OP6800 512K/512K, RoHS	289.00
812—20-101-0497	OP6810, RoHS	199.00

Programming/Development Tools

694—101-0666	Dynamic C Module	359.00
812—101-0505	OP6800 Proto Board	49.00
694—540-0070	RS-232-to-USB Converter Cable	39.00
694—101-0580	RabbitLink card	129.00
694—101-0589	Rabbit Cloning Board	89.00

Expansion Boards

694—101-0467	8 Meg Serial Flash	89.00
812—101-0282	Universal Relay Board	99.00

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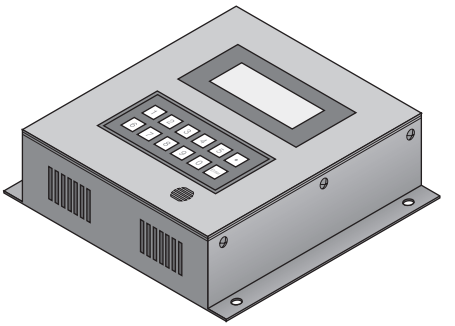
RABBIT Single Board Computers

OP6700 INTELLICOM

The Intellicom is a C-programmable, 12-key graphic display with Ethernet for network connectivity and a VFD option for applications requiring high visibility. To accommodate users' installation preferences, the versatile Intellicom can be either wall or panel mounted.



Specifications:

Feature	OP6700	OP6600
Microprocessor	Rabbit 2000 at 18.432 MHz	
Ethernet Port	10Base-T, RJ-45	None
Flash	512K (2 x 256)	256K
SRAM	128K	
Backup Battery	Socketed board with 3 V lithium coin-type, 1,000 mA·h, supports RTC and SRAM	
Keypad/Display	2 x 6 domed tactile keypad with customizable legend, supertwist 4 x 20 LCD with backlighting	
Digital Inputs	4 protected to ±36 VDC	
Digital Outputs	4 sink 200 mA, 40 VDC max.	
Speaker Outputs	Software-adjustable frequency and volume	
Serial Ports	3 total: one 5 V CMOS-compatible (programming) and either two 3-wire RS-232, one 3-wire RS-232 and one RS-485, or one 5-wire RS-232	
Serial Rate	Max. burst rate = CLK/32 Max. sustained rate = burst/2	
Connectors	Screw terminals	
Real-Time Clock	Yes	
Timers	Five 8-bit timers (four cascadable from the first) and one 10-bit timer with 2 match registers	
Watchdog/Supervisor	Yes	
Power	9–40 VDC, 2.4 W (backlighting on)	
Operating Temp	0–50°C	
Humidity	5–95%, non-condensing	
Board Size	4.7" x 4.3" x 0.8" (119 x 109 x 20 mm)	
Enclosure	6.7" x 5.7" x 2.0" (170 x 145 x 51 mm)	

Tool Kit

MOUSER STOCK NO. Mfr.	MOUSER STOCK NO. Mfr. Part No.	Description	Price Each
	812—101-0414	Intellicom Tool Kit (board not included)	200.00

Product Only ✻RoHS Compliant

✻812—20-101-0411	OP6700	289.00
812—101-0412	OP6600	219.00

Programming/Development Tools ✻RoHS Compliant

694—101-0666	Dynamic C Module	359.00
694—540-0070	RS-232-to-USB Converter Cable	39.00
✻694—20-101-0580	RabbitLink Card	129.00
694—101-0589	Rabbit Cloning Board	89.00
812—101-0410	Battery Board	25.00

Expansion Boards ✻RoHS Compliant

✻694—20-101-0467	8 Meg Serial Flash	89.00

EM1500 SERIAL-ETHERNET BRIDGE

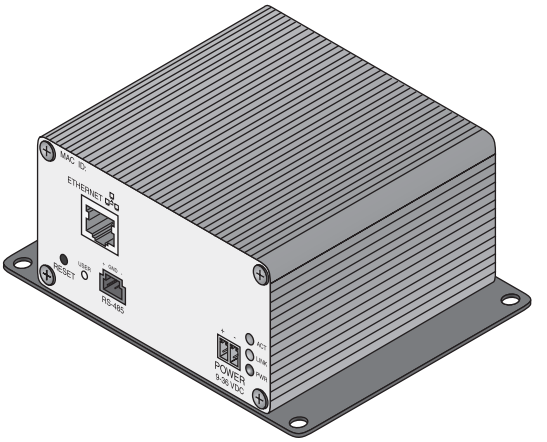
The EM1500 Serial-Ethernet Bridge is a device that converts multi-point serial communications to a TCP/IP network. The EM1500 connects to and network enables as many as 4 RS-232 serial devices simultaneously, while also acting as master on a multi-drop RS-485 network. In addition, the EM1500 provides an SPDT relay, 2 digital open collector outputs and 3 digital inputs suitable for interfacing to mechanical switches or logic level circuits.

Success in today's marketplace demands rapid, low-cost access to information. The EM1500 is designed to allow easy setup and monitoring via a "black box" approach. No programming is needed. The tight integration of hardware and software offers unparalleled reliability. Quick configuration over Ethernet, using a web browser or the stand-alone GUI configuration program, is easy and convenient.

The EM1500 interfaces with all types of serial devices: modems, sensors, card readers, bar scanners, printers, etc. Having 2 EM1500s allows the creation of a transparent serial bridge, thereby using some of the more advanced software features, such as packaging and protocol conversions.

Hardware Features:
- 10/100Base-T Ethernet
- 4 Serial Ports
- Guaranteed throughput 600 Kpbs (subject to network throughput)
- Serial ports 3 & 4 are either independent RS-232 ports up to 120 Kbps or TTL
- RS-485 up to 230.4 Kbps
- Easily interface legacy serial devices to Ethernet
- Extend the communication distance between 2 serial devices
- Metal enclosure for industrial applications

Software Features:
- Web browser interface for remote configuration
- GUI for easy configuration and monitoring
- Secure remote configuration
- AT command set emulation



Specifications:

Feature	EM1500
Microprocessor	Rabbit 3000 at 44.2 MHz
Ethernet	10/100Base-T, RJ-45
Flash	512K/256K data
SRAM	512K program execution
Backup Battery	3 V lithium coin type, 950 mAh
Relay	SPDT, 1 A @ 30 VDC, 0.3 A @ 120 VAC
Digital Inputs	3 protected to ± 36 V
Digital Outputs	2 sinking up to 750 mA, > -0.5V; < (Vin + 0.5V).
Serial Ports	1 DTE RS-232, 1 DCE RS-232, 1 RS-485 half duplex, 1 or 2 configurable serial port(s): Two 3-wire, One 5-wire, or one 9-wire (TTL only)
Serial Rate	75-230.4 Kpbs, 7/8 data bits, N/O/E/M/S parity, 1 stop, min thru-put: 600 Kbps
Serial buffer	1020 bytes
Configuration GUI	Supports WIN32, x86 Linux
Flow Control (RS-232)	None, XON/XOFF, RTS/CTS, DTR/DSR, DCD set independently for each directions (Tx, Rx)
Protocols	TCP/IP, telnet, RFC2217, DHCP, ARP, ICMP, DNS
LEDs	4: PWR (red), ACT (yellow), LINK (green), USER (red and green)
Power	9-36 VDC @ 1.5 W max
Operating Temp	–40°C to +70°C
Humidity	5–95%, noncondensing
Connectors	2 DB9 (1 male, 1 female), 1: 1x9 IDC, 0.1" pitch header, 1: 1x3 IDC, 0.1" pitch header 1: 2x5 IDC, 0.1" pitch header, RJ – 45, 1: 2 Position screw terminal
Enclosure Size	3.56" x 4.18 " x 1.72" (90 x 106 x 44 mm)

Tool Kit

MOUSER STOCK NO. Mfr.	MOUSER STOCK NO. Mfr. Part No.	Description	Price Each
	812—101-0585	Serial-Ethernet Bridge Tool Kit	99.00

Product Only

MOUSER STOCK NO. Mfr.	MOUSER STOCK NO. Mfr. Part No.	Description	Price Each
	812—101-0583	EM1500 pre-programmed Ethernet Gateway	249.00